SLV-SE610/SE710/SE810/SX710/SX717/SX810/X9

RMT-V259/V259B/V259K/V259L/V259R/V259S/V288/V288A/V288B/V288C

SERVICE MANUAL

French Model
SLV-SE610B/SE710B/SE810B/SX710B/X9B

German Model
SLV-SE710D/SE810D/SX710D/SX717D/SX810D/X9D

Italian Model
SLV-SE610A

East European Model

Russian Model
SLV-SE610K/SE610N/SE710K/SE710N/SE810K/SE810N/SX710K/SX710N/X9N

North European Model
SLV-SE610E/SE710E/SE810E/SX710E/SX717E/X9E

UK Model
SLV-SE610G/SE710G/SE710I/SE810G/X9G

Photo: SLV-SE810

SR MECHANISM

Hi-Fi

- **Refer to the SERVICE MANUAL of VHS MECHANICAL ADJUSTMENTS VI for MECHANICAL ADJUSTMENTS. (9-921-647-11)**

* The abbreviations of SE610, SE710, SE810, SX710, SX717, SX810 and X9 contained in this service manual are indicated when these models are common to all their corresponding models as given below.

Abbreviated model name	SE610	SE710	SE810	SX710	SX717	SX810	X9
All model names SLV-	SE610A SE610B SE610E SE610G SE610K SE610N	SE710B SE710D SE710E SE710G SE710I SE710K SE710N	SE810B SE810D SE810E SE810G SE810K SE810N	SX710B SX710D SX710E SX710K SX710N	SX717D SX717E	SX810D	X9B X9D X9E X9G X9N

VHS VIDEO CASSETTE RECORDER

SONY®

SPECIFICATIONS

System

Channel coverage
SLV-SE610N/K, SE710N/K, SE810N/K, SX710N/K, X9N
PAL (B/G, D/K)
VHF E2–E12, R1–R12
UHF E21–E69, R21–R69
CATV S1–S41, S01–S05
SLV-SE610B, SE710B, SE810B, SX710B, X9B
SECAM (L):
VHF F2 to F10
UHF F21 to F69
CATV B to Q
HYPER S21 to S41
PAL (B/G):
VHF E2 to E12
VHF Italian channel A to H
UHF E21 to E69
CATV S01 to S05, S1 to S20
HYPER S21 to S41
RF output signal
SLV-SE610A/E, SE710D/E, SE810D/E, X9D/E,
SX710D/E, SX717D/E, SX810D/E
PAL (B/ G)
VHF E2 to E12
VHF Italian channel A to H
UHF E21 to E69
CATV S01 to S05,S1toS20
HYPER S21 to S41
SLVSE610G, SE710G/I, SE810G, X9G
PAL (I)
VHF IA to IJ, SA10 to SA13 (SLV-SE710I)
UHF B21 to B69
CATV S01 to S05, S1 to S20 (SLV-SE710I)
HYPER S21 to S41 (SLV-SE710I)

RF output signal
UHF channels 21–69
Aerial out
75-ohm asymmetrical aerial socket
Tape speed
SLV-SE610N/K, SE710N/K, SE810N/K, SX710N/K, X9N
SP: PAL/MESECAM
23.39 mm/s (recording/playback)
NTSC
33.35 mm/s (playback only)
LP: PAL/MESECAM
11.70 mm/s (recording/playback)
NTSC
16.67 mm/s (playback only)
EP: NTSC
11.12 mm/s (playback only)
SLV-SE610B, SE710B, SE810B, SX710B, X9B
SP: PAL 23.39 mm/s (recording/playback)
NTSC 33.35 mm/s (playbackonly)
SECAM 23.39 mm/s (recording/playback)
MESECAM 23.39 mm/s (playback only)
LP: PAL 11.70 mm/s (recording/playback)
NTSC 16.67 mm/s (playback only)
SECAM 11.70 mm/s (recording/playback)
MESECAM 1.70 mm/s (playback only)
EP: NTSC 11.12 mm/s (playback only)
SLV-SE610A/E/G, SE710D/E/G/I, SE810D/E/G, X9D/E/G,
SX710D/E, SX717D/G, SX810D,
SP: PAL23.39 mm/s (recording/playback)
NTSC33.35 mm/s (playback only)
LP: PAL11.70 mm/s (recording/playback)
NTSC16.67 mm/s (playback only)
EP: NTSC11.12 mm/s (playback only)
Maximum recording/playback time
10 hrs. in LP mode (with E300 tape)
Fast-forward and rewind time
Approx. 1 min. (with E180 tape)

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

Inputs and outputs

☞ LINE-1 (TV)
21-pin
Video input: pin 20
Audio input: pins 2 and 6
Video output: pin 19
Audio output: pins 1 and 3
SLV-SE610E, SE710D/E/N/K, SX710D/E/N/K, SX717D/E
DECODER/→ LINE-2 IN
21-pin
Video input: pin 20
Audio input: pins 2 and 6
SLV-SE810D/E/N/K, SX810D, X9E/N
DECODER/→ LINE-3 IN
21-pin
Video input: pin 20
Audio input: pins 2 and 6
SLV-SE810D/E/N/K, SX810D, X9E/N
→ LINE-2 L → R
VIDEO IN, phono jack (1)
Input signal: 1 Vp-p, 75 ohms,
unbalanced, sync negative
AUDIO IN, phono jack (2)
Input level: 327 mVrms
Input impedance: more than 47 kilohms
SLV-SE610B, SE710B, SX710B
DECODEUR/→ ENTREE LIGNE-2
21-pin
Video input: pin 20
Audio input: pins 2 and 6
SLV-SE810B, X9B
DECODEUR/→ ENTREE LIGNE-3
21-pin
Video input: pin 20
Audio input: pins 2 and 6
SLV-SE810B, X9B
→ LIGNE-2 G o D
ENTREE VIDEO, phono jack (1)
Input signal: 1 Vp-p, 75 ohms,
unbalanced, sync negative
ENTREE AUDIO, phono jack (2)
Input level: 327 mVrms
Input impedance: more than 47 kilohms
SLV-SE710G, SE710I
→ LINE-2 IN
21-pin
Video input: pin 20
Audio input: pins 2 and 6
SLV-SE810G,X9G
→ LINE-3 IN
21-pin
Video input: pin 20
Audio input: pins 2 and 6
SLV-SE810G, X9G
→ LINE-2 IN L → R
VIDEO IN, phono jack (1)
Input signal: 1 Vp-p, 75 ohms,
unbalanced, sync negative
AUDIO IN, phono jack (2)
Input level: 327 mVrms
Input impedance: more than 47 kilohms
→ R/D L/G
Phono jack (2)
Rated output level: 327 mVrms
Load impedance: 47 kilohms
Output impedance: less than 10 kilohms

General

Power requirements
220 – 240 V AC, 50 Hz
Power consumption
20 W
SLV-610A/E, SE710D/E/N/K, SE810D/E/N/K, X9D/E/N,
SX710D/E/N/K, SX717D/E, SX810D
1.2 W (POWER SAVE is set to FULL/ON, minimum)
SLV-SE610G, SE710G/I, SE810G
1.2 W (POWER SAVE is set to ON, minimum)
SLV-SE610B, SE710B, SE810B, SX710B, X9B
1.2 W (VEILLE ECO is set to TOTAL, minimum)
Operating temperature
5°C to 40°C
Storage temperature
–20°C to 60°C
Dimensions including projecting parts and controls
SLV-610A/E/B/N/K/G, SE710B/D/E/N/K/G/I,
SX710B/D/E/N/K, SX710D/E
Approx. 430 × 98 × 283 mm (w/h/d)
SLV-SE810B/D/E/N/K/G, SX810D
Approx. 430 × 98 × 289 mm (w/h/d)
SLV-X9
Approx. 430 × 110 × 285 mm (w/h/d)
Mass
EXCEPT SLV-X9
Approx. 4.1 kg
SLV-X9
Approx. 4.3 kg

Supplied accessories

Remote commander (1)
R6 (size AA) batteries (2)
Aerial cable (1)

Design and specifications are subject to change without notice.

• **Feature Difference**

SLV- / FEATURE	SE610A	SE610B	SE610E	SE610G	SE610K	SE610N	SE710B	SE710D
SECAM (REC/PB)	×/×	○/○	×/×	×/×	×/×	×/×	○/○	×/×
ME-SECAM (REC/PB)	×/×	×/○	×/×	×/×	○/○	○/○	×/○	×/×
EURO INPUT	21pin	21pin × 2	21pin × 2	21pin	21pin	21pin	21pin × 2	21pin × 2
RCA FRONT LINE INPUT	×	×	×	×	×	×	×	×
ADDITIONAL REAR OUTPUT (AUDIO OUT)	×	×	×	×	×	×	2pin (R.W)	2pin (R.W)
MODULATOR SYSTEM	G	L/G	G	I	G/K	G/K	L/G	G
STB CONTROL	×	×	×	×	×	×	×	×
REMOTE COMMANDER RMT-	V288B	V288C	V288B	V288B	V288B	V288B	V288C	V228B

SLV- / FEATURE	SE710E	SE710G	SE710I	SE710K	SE710N	SE810B	SE810D	SE810E
SECAM (REC/PB)	×/×	×/×	×/×	×/×	×/×	○/○	×/×	×/×
ME-SECAM (REC/PB)	×/×	×/×	×/×	○/○	○/○	×/○	×/×	×/×
EURO INPUT	21pin × 2	21pin × 2	21pin × 2	21pin × 2	21pin × 2	21pin × 2	21pin × 2	21pin × 2
RCA FRONT LINE INPUT	×	×	×	×	× (R.W.Y)	3pin (R.W.Y)	3pin (R.W.Y)	3pin
ADDITIONAL REAR OUTPUT (AUDIO OUT)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)
MODULATOR SYSTEM	G	I	I	G/K	G/K	L/G	G	G
STB CONTROL	×	×	×	×	×	×	×	×
REMOTE COMMANDER RMT-	V288B	V288B	V288B	V288B	V288B	V259L	V259K	V259K

SLV- / FEATURE	SE810G	SE810K	SE810N	SX710B	SX710D	SX710E	SX710K	SX710N
SECAM (REC/PB)	×/×	×/×	×/×	○/○	×/×	×/×	×/×	×/×
ME-SECAM (REC/PB)	×/×	○/○	○/○	×/○	×/×	×/×	○/○	○/○
EURO INPUT	21pin × 2	21pin × 2	21pin × 2	21pin × 2	21pin × 2	21pin × 2	21pin × 2	21pin × 2
RCA FRONT LINE INPUT	3pin (R.W.Y)	3pin (R.W.Y)	3pin (R.W.Y)	×	×	×	×	×
ADDITIONAL REAR OUTPUT (AUDIO OUT)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)
MODULATOR SYSTEM	I	G/K	G/K	L/G	G	G	G/K	G/K
STB CONTROL	×	×	×	×	×	×	×	×
REMOTE COMMANDER RMT-	V259K	V259K	V259K	V288A	V288	V288	V288	V288

SLV- / FEATURE	SX717D	SX717E	SX810D	X9B	X9D	X9E	X9G	X9N
SECAM (REC/PB)	×/×	×/×	×/×	○/○	×/×	×/×	×/×	×/×
ME-SECAM (REC/PB)	×/×	×/×	×/×	×/○	×/×	×/×	×/×	○/○
EURO INPUT	21pin × 2	21pin × 2	21pin × 2	21pin × 2	21pin × 2	21pin × 2	21pin × 2	21pin × 2
RCA FRONT LINE INPUT	×	× (R.W.Y)	3pin (R.W.Y)	3pin (R.W.Y)	3pin (R.W.Y)	3pin (R.W.Y)	3pin (R.W.Y)	3pin
ADDITIONAL REAR OUTPUT (AUDIO OUT)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)	2pin (R.W)
MODULATOR SYSTEM	G	G	G	L/G	G	G	I	G/K
STB CONTROL	×	×	×	○	○	○	○	×
REMOTE COMMANDER RMT-	V259	V259	V259	V259S	V259R	V259R	V259R	V259B

TABLE OF CONTENTS

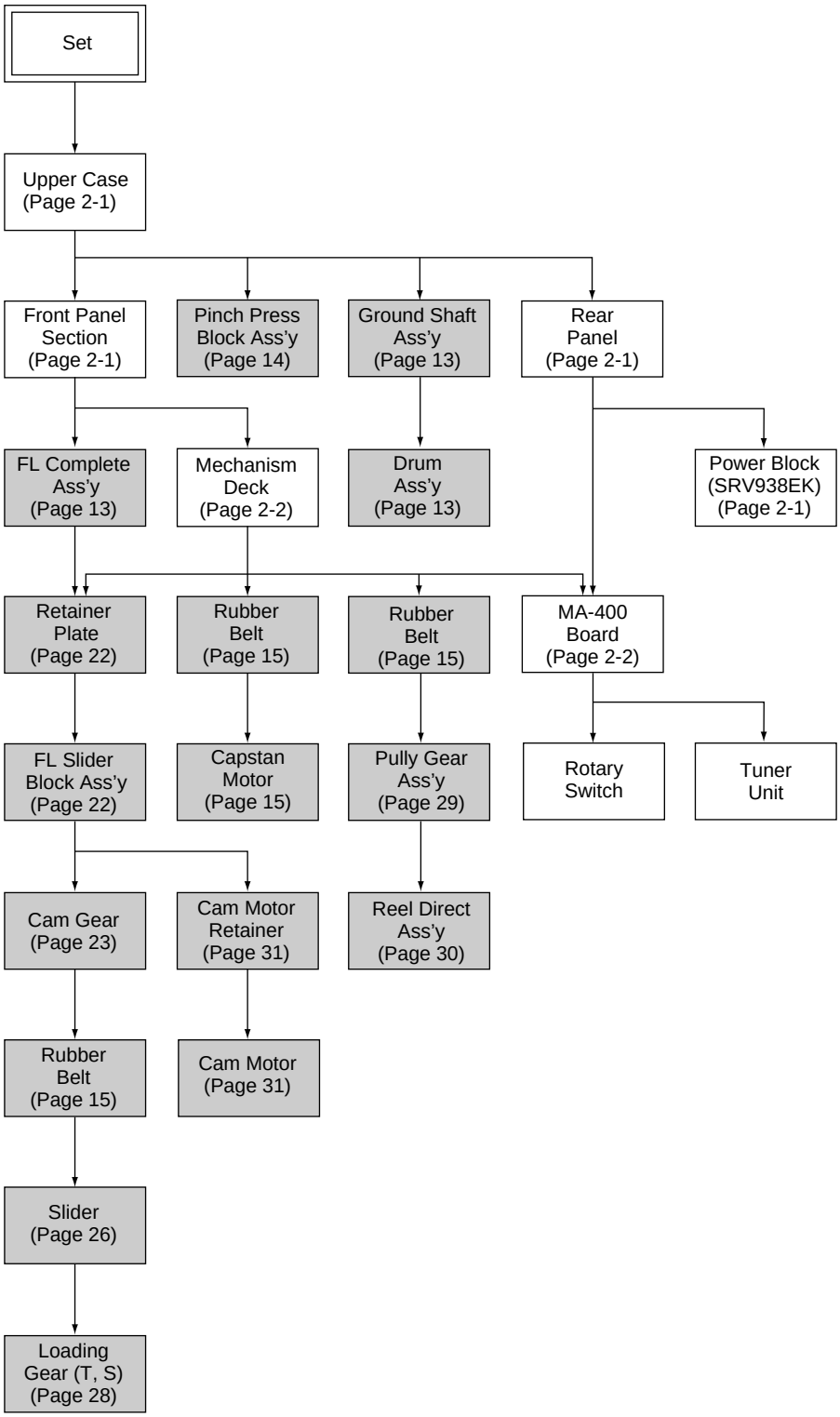
Section	Title	Page
Feature Difference		4
SERVICE NOTE		6
1.	GENERAL	
	Getting Started	1-1
	Basic Operations	1-11
	Additional Operations	1-15
	Editing	1-21
2.	DISASSEMBLY	
2-1.	Upper Case Removal	2-1
2-2.	Rear Panel Removal	2-1
2-3.	Power Block (SRV938EK) Removal	2-1
2-4.	Front Panel Section Removal	2-1
2-5.	Mechanism Deck Removal	2-2
2-6.	MA-400 Board Removal	2-2
2-7.	Internal Views	2-3
2-8.	Circuit Boards Location	2-4
3.	BLOCK DIAGRAMS	
3-1.	Overall Block Diagram	3-1
3-2.	Video Block Diagram	3-3
3-3.	Servo/System Control Block Diagram	3-5
3-4.	Audio Block Diagram	3-7
3-5.	Tuner Block Diagram	3-9
3-6.	Mode Control Block Diagram	3-11
3-7.	Power Block Diagram	3-13
4.	PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS	
4-1.	Frame Schematic Diagram	4-3
4-2.	Printed Wiring Boards and Schematic Diagrams	4-5
	MA-400 Printed Wiring Board	4-5
	MA-400 (Video, Audio) Schematic Diagram	4-9
	MA-400 (SECAM) Schematic Diagram	4-11
	MA-400 (Servo/System Control) Schematic Diagram	4-13
	MA-400 (Hi-Fi Audio) Schematic Diagram	4-17
	MA-400 (I/O) Schematic Diagram	4-19
	MA-400 (Tuner) Schematic Diagram	4-21
	MA-400 (Mode Control) Schematic Diagram	4-23
	MA-400 (Power Supply) Schematic Diagram	4-25
	DS-95 Schematic Diagram	4-27
	JK-201 Schematic Diagram	4-27
	DS-95 Printed Wiring Board	4-29
	JK-201 Printed Wiring Board	4-29
	SRV938EK Printed Wiring Board	4-31
	SRV938EK Schematic Diagram	4-33
5.	INTERFACE, IC PIN FUNCTION DESCRIPTION	
5-1.	System Control-Video Block Interface (MA-400 BOARD IC162)	5-1
5-2.	System Control-Servo Peripheral Circuit Interface (MA-400 BOARD IC162)	5-1
5-3.	System Control-Mechanism Block Interface (MA-400 BOARD IC162)	5-2
5-4.	System Control-System Control Peripheral Circuit Interface (MA-400 BOARD IC162)	5-3
5-5.	System Control-Audio Block Interface (MA-400 BOARD IC162)	5-3
5-6.	Servo/System Control Microprocessor Pin Function (MA-400 BOARD IC162)	5-4
5-7.	Mode Control Pin Function (MA-400 BOARD IC420)	5-5
6.	ERROR CODES	6-1
7.	ADJUSTMENTS	
7-1.	Mechanical Adjustments	7-1
7-2.	Electrical Adjustments	7-1
2-1.	Pre-Adjustment Preparations	7-1
2-1-1.	Instruments to be Used	7-1
2-1-2.	Connection	7-1
2-1-3.	Set-up of Adjustment	7-1
2-1-4.	Alignment Tapes	7-1
2-1-5.	Specified I/O Level and Impedance	7-1
2-1-6.	Adjusting Sequence	7-2
2-2.	Power Supply Adjustments	7-2
2-2-1.	Power Supply Check	7-2
2-2-2.	+6 V Adjustment	7-2
2-3.	Servo System Adjustment	7-2
2-3-1.	RF Switching Position Adjustment	7-2
2-4.	Audio System Adjustments	7-3
2-4-1.	Hi-Fi Audio System Adjustment	7-3
1.	AF Switching Position Adjustment	7-3
2.	Frequency Response Check	7-3
3.	Overall Level Characteristic and Distortion Factor Check	7-4
4.	Overall S/N Check	7-4
2-4-2.	Normal Audio System Adjustment	7-4
1.	ACE Head Adjustment	7-4
2.	E-E Output Level Check	7-4
3.	Frequency Response Check	7-4
4.	Overall Level Characteristic and Distortion Factor Check	7-5
5.	Overall S/N Check	7-5
2-5.	Parts Arrangement Diagram for Adjustments	7-6
8.	REPAIR PARTS LIST	
8-1.	Exploded Views	8-1
8-1-1.	Front Panel and Cabinet Assemblies	8-1
8-1-2.	Chassis Assembly	8-3
8-1-3.	Mechanism Chassis Assembly (1)	8-4
8-1-4.	Mechanism Chassis Assembly (2)	8-5
8-1-5.	Mechanism Chassis Assembly (3)	8-6
8-2.	Electrical Parts List	8-7

SERVICE NOTE

1. DISASSEMBLY

• This set can be disassembled in the order shown below.

Note: Pages in ▭ indicated pages in the SERVICE MANUAL.
Pages in ▭ indicated pages in the VHS MECHANICAL ADJUSTMENT MANUAL VI.


Set
Upper Case (Page 2-1)
Front Panel Section (Page 2-1)
Pinch Press Block Ass'y (Page 14)
Ground Shaft Ass'y (Page 13)
Rear Panel (Page 2-1)
FL Complete Ass'y (Page 13)
Mechanism Deck (Page 2-2)
Drum Ass'y (Page 13)
Power Block (SRV938EK) (Page 2-1)
Retainer Plate (Page 22)
Rubber Belt (Page 15)
Rubber Belt (Page 15)
MA-400 Board (Page 2-2)
FL Slider Block Ass'y (Page 22)
Capstan Motor (Page 15)
Pully Gear Ass'y (Page 29)
Rotary Switch
Tuner Unit
Cam Gear (Page 23)
Cam Motor Retainer (Page 31)
Reel Direct Ass'y (Page 30)
Rubber Belt (Page 15)
Cam Motor (Page 31)
Slider (Page 26)
Loading Gear (T, S) (Page 28)

This section is extracted from instruction manual. (3-065-678-11)

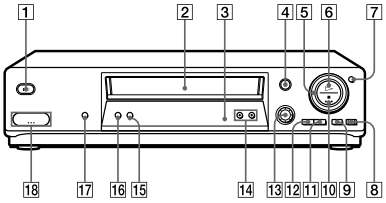
Getting Started

Index to parts and controls

Refer to the pages indicated in parentheses ( ) for details.

Front panel

SLV-SE810N/K

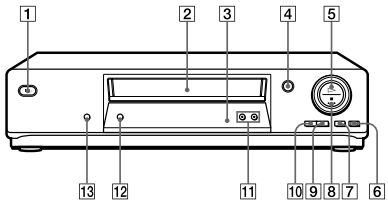


1 I/⏻ (on/standby) switch (19)
2 Tape compartment
3 Remote sensor (11)
4 ⏏ (eject) button (44)
5 Shuttle ring (63)
6 ▷ (play) button (44) (63)
7 JOG button (64)
8 ● REC (record) button (46) (65) (89)
9 ❚❚ (pause) button (44) (89)
10 ■ (stop) button (44) (89)
11 ▶▶ (fast-forward) button (44) (63)
12 ◀◀ (rewind) button (44) (63)
13 ◴ DIAL TIMER (50)
14 PROGRAM +/– buttons (22) (64) (81)
15 AUDIO DUB button (90)
16 AUTO SET UP/ RF (Radio Frequency) CHANNEL button (19) (22)
17 SYNCHRO REC (Synchronized Recording) button (67)
18 LINE-2 L (left) R (right) jacks (covered) (87) (88)

How to open the jack cover

1 Press the bottom of the cover.
2 Hook your finger on the top edge of the cover and pull it open.

SLV-SE610N/K, SE710N/K, SX710N/K

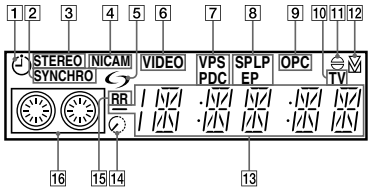


1 I/⏻ (on/standby) switch (19)
2 Tape compartment
3 Remote sensor (11)
4 ⏏ (eject) button (44)
5 ▷ (play) button (44) (63)
6 ● REC (record) button (46) (65) (89)
7 ❚❚ (pause) button (44) (89)
8 ■ (stop) button (44) (89)
9 ▶▶ (fast-forward) button (44) (63)
10 ◀◀ (rewind) button (44) (63)
11 PROGRAM +/– buttons (22) (64) (81)
12 AUTO SET UP/ RF (Radio Frequency) CHANNEL button (19) (22)
13 SYNCHRO REC (Synchronized Recording) button* (67)

* not available on SLV-SE610N/K

continued

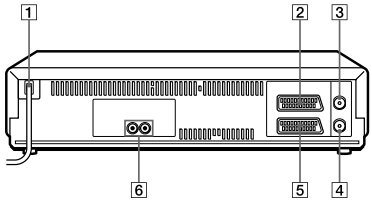
Display window



1 Timer indicator (52) (57) (60)
2 SYNCHRO indicator*1 (67)
3 STEREO indicator (70)
4 NICAM indicator*2 (70)
5 ∽ (smartlink) indicator*1 (17)
6 VIDEO indicator (16) (47)
7 VPS (Video Programme System)/ PDC (Programme Delivery Control) indicator*1 (57)
8 Tape speed indicators (46)
9 OPC (Optimum Picture Control) indicator (82)
10 TV indicator*1 (48)
11 Audio dubbing indicator*3 (90)
12 Tracking indicator (81)
13 Time counter/clock/line/programme position indicator (44) (46) (89)
14 Remaining time indicator (47)
15 RR (Reality Regenerator) indicator (81)
16 Tape/recording indicator (46)

*1 not available on SLV-SE610N/K
*2 SLV-SE610N, SE710N, SX710N, and SE810N only
*3 SLV-SE810N/K only

Rear panel



1 Mains lead (15) (16)
2 DECODER/ LINE-2 IN DECODEUR/ ENTREE LIGNE-2 connector*1 (18) (39) (66) (88)

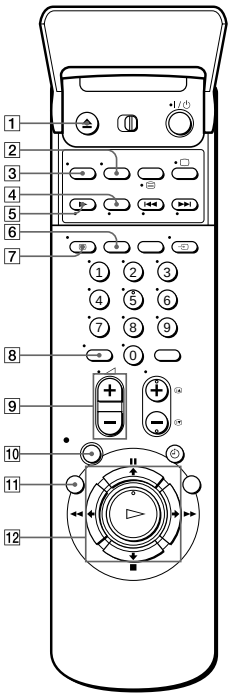
DECODER/ LINE-3 IN DECODEUR/ ENTREE LIGNE-3 connector*2 (18) (39) (66) (88)

3 AERIAL IN ANTENNE ENTREE connector (15) (16)
4 AERIAL OUT ANTENNE SORTIE connector (15) (16)
5 LINE-1 (TV) LIGNE-1 (TV) connector (16) (39)
6 (audio out) R/D (right) L/G (left) jacks*3 (18)

*1 SLV-SE710N/K and SX710N/K only
*2 SLV-SE810N/K only
*3 not available on SLV-SE610N/K

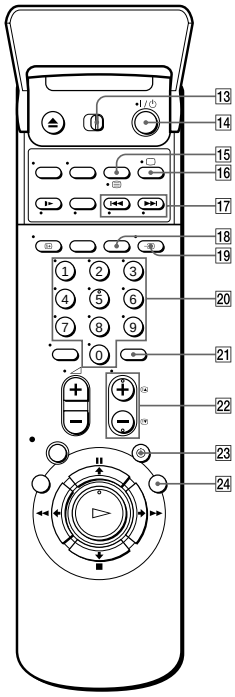
continued

Remote commander



1 ⏏ EJECT button (44)
2 WIDE button (*for TV*) (13)
3 AUDIO MONITOR button (70)
4 ×2 button* (63)
5 ▮► SLOW button* (63)
6 SP (Standard Play)/LP (Long Play) button (46)
7 DISPLAY button (47)
8 -/-- (ten's digit) button (12) (47)
9 (volume) +/– buttons (*for TV*) (13)
10 ● REC (record) button (46) (65)
11 MENU button (25) (68)
12 ❚❚ PAUSE/↑ button (25) (44)
■ STOP/↓ button (25) (44)
◄◄ REW (rewind)/← button (44) (63)
►► FF (fast-forward)/→ button (44) (63)
▷ PLAY/OK button (25) (44)

* FASTEXT buttons (*for TV*) (SLV-SE810N/K only)



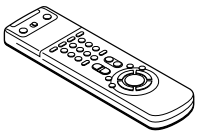
13 TV / VIDEO remote control switch (11)
14 I/⏻ (on/standby) switch (12) (57)
15 COUNTER/REMAIN button (47)
(Teletext) button*2 (*for TV*) (13)
16 TV power on/TV mode select button*2 (*for TV*) (12)
17 I◄◄/►►I INDEX SEARCH buttons*1 (80)
18 CLEAR button (44) (56) (68)
19 TV/VIDEO button (12) (16) (47)
20 Programme number buttons (12) (47)
21 INPUT SELECT button (47) (60) (89)
22 PROG (programme) +/– buttons (12) (31) (46)
Teletext page access buttons*2 (*for TV*) (13)
23 TIMER button (55) (59)
24 SMART SEARCH button (73)

*1 FASTEXT buttons (*for TV*) (SLV-SE810N/K only)
*2 SLV-SE810N/K only

Step 1 : Unpacking

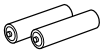
Check that you have received the following items with the VCR:

- Remote commander



- Aerial cable

- R6 (size AA) batteries



Check your model name

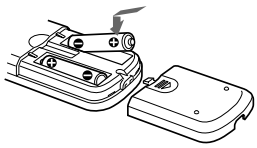
The instructions in this manual are for the 8 models: SLV-SE610N, SE610K, SE710N, SE710K, SX710N, SX710K, SE810N, and SE810K. Check your model number by looking at the rear panel of your VCR.
SLV-SE810N is the model used for illustration purposes. Any difference in operation is clearly indicated in the text, for example, "SLV-SE710N only."

Step 2 : Setting up the remote commander

Inserting the batteries

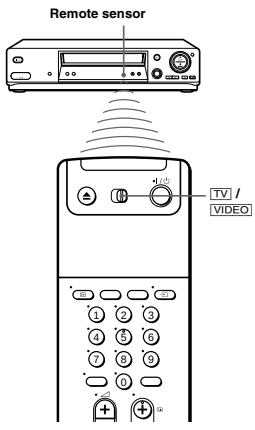
Insert two R6 (size AA) batteries by matching the + and – on the batteries to the diagram inside the battery compartment.

Insert the negative (–) end first, then push in and down until the positive (+) end clicks into position.



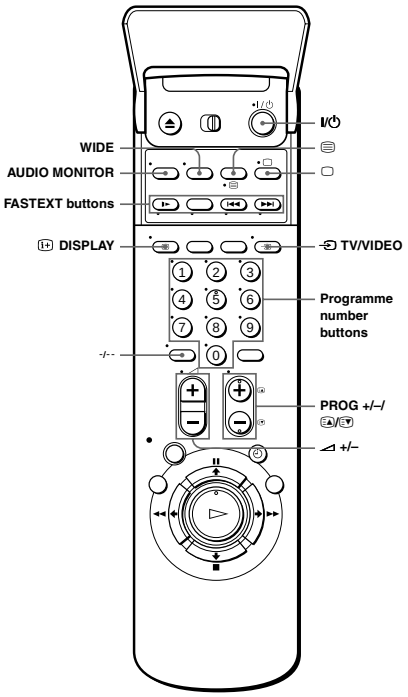
Using the remote commander

You can use this remote commander to operate this VCR and a Sony TV. Buttons on the remote commander marked with a dot (•) can be used to operate your Sony TV. If the TV does not have the F symbol near the remote sensor, this remote commander will not operate the TV.



To operate	Set TV / VIDEO to
the VCR	VIDEO and point at the remote sensor at the VCR
a Sony TV	TV and point at the remote sensor at the TV

continued



TV control buttons

To	Press
Set the TV to standby mode	I/⏻
Select an input source: aerial in or line in	TV/VIDEO
Select the TV's programme position	Programme number buttons, -/--, PROG +/–

To	Press
Adjust the volume of the TV	+/–
Switch to TV (Teletext off)*	(TV)
Switch to Teletext*	(Teletext)
Select the sound	AUDIO MONITOR
Use FASTEXT*	FASTEXT buttons
Call up the on-screen display	DISPLAY
Change the Teletext page*	/
Switch to/from wide mode of a Sony wide TV (For other manufactures' wide TVs, see "Controlling other TVs with the remote commander (SLV-SE810N/K only)" below.)	WIDE

Notes
- With normal use, the batteries should last about three to six months.
- If you do not use the remote commander for an extended period of time, remove the batteries to avoid possible damage from battery leakage.
- Do not use a new battery together with an old one.
- Do not use different types of batteries together.
- Some buttons may not work with certain Sony TVs.

* SLV-SE810N/K only

Controlling other TVs with the remote commander (SLV-SE810N/K only)

The remote commander is preprogrammed to control non-Sony TVs. If your TV is listed in the following table, set the appropriate manufacturer's code number.

1 Set TV / VIDEO at the top of the remote commander to TV.

2 Hold down I/⏻, and enter your TV's code number using the programme number buttons. Then release I/⏻.

Now you can use the following TV control buttons to control your TV:

I/⏻, TV/VIDEO, programme number buttons, -/-- (ten's digit), PROG +/–, +/–, (TV), (Teletext), FASTEXT buttons, WIDE*, MENU*, ↑/↓/←/→*, and OK*.

* These buttons may not work with all TVs.

continued

Code numbers of controllable TVs

If more than one code number is listed, try entering them one at a time until you find the one that works with your TV.

To switch to wide mode, see the footnotes below this table for the applicable code numbers.

Manufacturer	Code number
Sony	01*1, 02
Akai	68
Ferguson	52
Grundig	10*1, 11*1
Hitachi	24
JVC	33
Loewe	45
Mivar	09, 70
NEC	66
Nokia	15, 16, 69*3

Manufacturer	Code number
Panasonic	17*1, 49
Philips	06*1, 07*1, 08*1
Saba	12, 13
Samsung	22, 23
Sanyo	25
Sharp	29
Telefunken	36
Thomson	43*2
Toshiba	38

*1 Press WIDE to switch the wide picture mode on or off.

*2 Press WIDE, then press +/– to select the wide picture mode you want.

*3 Press WIDE. The menu appears on the TV screen. Then, press ↑/↓/←/→ to select the wide picture you want and press OK.

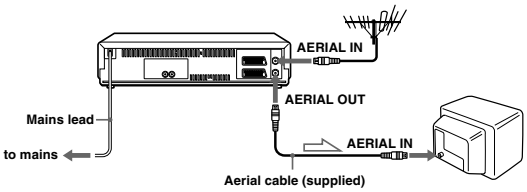
Tip
- When you set your TV's code number correctly while the TV is turned on, the TV turns off automatically.

Notes
- If you enter a new code number, the code number previously entered will be erased.
- If the TV uses a different remote control system from the one programmed to work with the VCR, you cannot control your TV with the remote commander.
- When you replace the batteries of the remote commander, the code number may change. Set the appropriate code number every time you replace the batteries.

Step 3 : Connecting the VCR

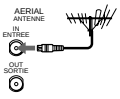
If your TV has a Scart (EURO-AV) connector, see page 16.

If your TV does not have a Scart (EURO-AV) connector

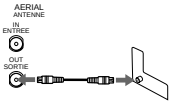


: Signal flow

1 Disconnect the aerial cable from your TV and connect it to AERIAL IN on the rear panel of the VCR.



2 Connect AERIAL OUT of the VCR and the aerial input of your TV using the supplied aerial cable.

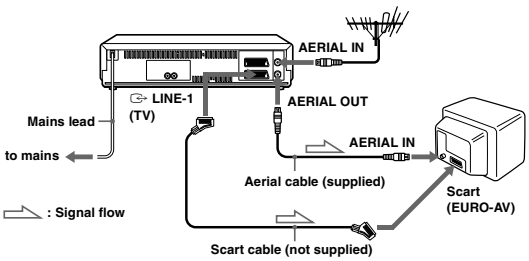


3 Connect the mains lead to the mains.

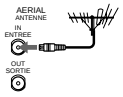
Note
- When you connect the VCR and your TV only with an aerial cable, you have to tune your TV to the VCR (see page 19).

continued

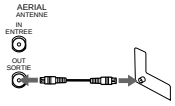
If your TV has a Scart (EURO-AV) connector



1 Disconnect the aerial cable from your TV and connect it to AERIAL IN on the rear panel of the VCR.

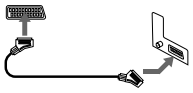


2 Connect AERIAL OUT of the VCR and the aerial input of your TV using the supplied aerial cable.



3 Connect LINE-1 (TV) on the VCR and the Scart (EURO-AV) connector on the TV with the optional Scart cable.

This connection improves picture and sound quality. Whenever you want to watch the VCR picture, press ⇨ TV/VIDEO to display the VIDEO indicator in the display window.



4 Connect the mains lead to the mains.

Note
- If the TV is connected to the LINE-1 (TV) connector, setting the RF channel to OFF is recommended. In the OFF position, only the signal from the aerial is output through the AERIAL OUT connector (see page 21).

About the SMARTLINK features (not available on SLV-SE610N/K)

If the connected TV complies with SMARTLINK, MEGALOGIC*1, EASYLINK*2, Q-Link*3, EURO VIEW LINK*4, or T-V LINK*5, this VCR automatically runs the SMARTLINK function after you complete the steps on the previous page (the ↻ indicator appears in the VCR's display window when you turn on the TV). You can enjoy the following SMARTLINK features.

- Preset Download
  You can download your TV tuner preset data to this VCR and tune the VCR according to that data in Auto Set Up. This greatly simplifies the Auto Set Up procedure. Be careful not to disconnect the cables or exit the Auto Set Up function during the procedure.
  See "Setting up the VCR with the Auto Set Up function" on page 22.
- TV Direct Rec
  You can easily record what you are watching on the TV. For details, see "Recording what you are watching on the TV (TV Direct Rec) (not available on SLV-SE610N/K)" on page 48.
- One Touch Play
  With One Touch Play, you can start playback automatically without turning on the TV. For details, see "Starting playback automatically with one button (One Touch Play) (not available on SLV-SE610N/K)" on page 45.
- One Touch Menu
  You can turn on the VCR and TV, set the TV to the video channel, and display the VCR's on-screen display automatically by pressing MENU on the remote commander.
- One Touch Timer
  You can turn on the VCR and TV, set the TV to the video channel, and display the timer recording menu (the TIMER METHOD menu, the TIMER menu, or the SHOWVIEW menu) automatically by pressing ◴ TIMER on the remote commander.
  You can set which timer recording menu is displayed using TIMER OPTIONS in the OPTIONS-2 menu (see page 85).
- Automatic Power Off
  You can have the VCR turn off automatically, if the VCR is not used after you turn off the TV.

*1 "MEGALOGIC" is a registered trademark of Grundig Corporation.
*2 "EASYLINK" is a trademark of Philips Corporation.
*3 "Q-Link" is a trademark of Panasonic Corporation.
*4 "EURO VIEW LINK" is a trademark of Toshiba Corporation.
*5 "T-V LINK" is a trademark of JVC Corporation.

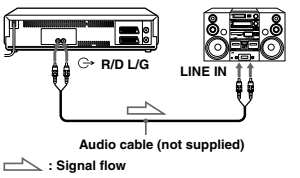
Note
- Not all TVs respond to the functions above.

continued

Additional connections

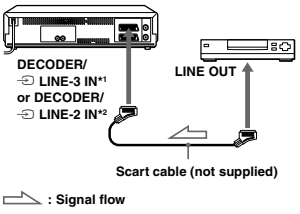
To a stereo system (not available on SLV-SE610N/K)

You can improve sound quality by connecting a stereo system to the ⇨ R/D L/G jacks as shown on the right.



To a satellite or digital tuner with Line Through (not available on SLV-SE610N/K)

Using the Line Through function, you can watch programmes from a satellite or digital tuner connected to this VCR on the TV even when the VCR is turned off. When you turn on the satellite or digital tuner, this VCR automatically sends the signal from the satellite or digital tuner to the TV without turning itself on.



1 Connect the satellite or digital tuner to the DECODER/LINE-3 IN*1 (or DECODER/LINE-2 IN*2) connector as shown above.
2 Set DECODER/LINE3*1 (or DECODER/LINE2*2) to LINE3*1 (or LINE2*2) in the OPTIONS-2 menu.
3 Set POWER SAVE to OFF or PARTIAL*3 in the OPTIONS-2 menu.
4 Turn off the VCR.
To watch a programme, turn on the satellite or digital tuner and the TV.

Note
- You cannot watch programmes on the TV while recording unless you are recording a satellite or digital programme.

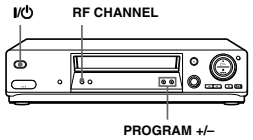
*1 SLV-SE810N/K only
*2 SLV-SE710N/K and SX710N/K only
*3 not available on SLV-SE610N/K

Step 4 : Tuning your TV to the VCR

If your TV has a Scart (EURO-AV) connector, see page 21.

If your TV does not have a Scart (EURO-AV) connector

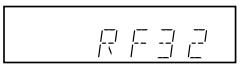
Follow the steps below so that your TV will properly receive the video signals from your VCR.



1 Press I/⏻ (on/standby) to turn on the VCR.

2

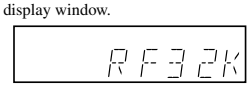
Press RF CHANNEL on the VCR lightly.
The factory-preset RF channel appears in the display window.
The VCR signal is output through this channel to the TV.



3 Turn on your TV and select a programme position for the VCR picture.
This programme position will now be referred to as the video channel.

4

Press RF CHANNEL.
The TV system appears in the display window.



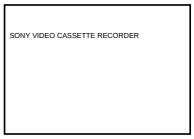
continued

5 PROGRAM –/+

Press PROGRAM +/– (repeatedly) to select the appropriate TV system for your area. Select “G” for the B/G TV system, or “K” for the D/K TV system.

6

Tune the TV to the same channel shown in the VCR display window so that the picture on the right appears clearly on the TV screen.



Refer to your TV manual for TV tuning instructions.

If you select the wrong TV system in step 5, the picture on the right may not appear. Select the appropriate TV system and tune the TV again.

If the picture does not appear clearly, see “To obtain a clear picture from the VCR” below.

7 AUTO SET UP / RF CHANNEL

Press RF CHANNEL.

You have now tuned your TV to the VCR. Whenever you want to play a tape, set the TV to the video channel.

To check to see if the TV tuning is correct

Set the TV to the video channel and press PROGRAM +/– on the VCR. If the TV screen changes to a different programme each time you press PROGRAM +/–, the TV tuning is correct.

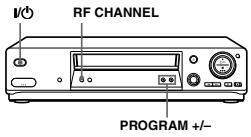
To obtain a clear picture from the VCR

If the screen does not appear clearly in step 6 above, go to step 7 to finish this procedure once. Then start again from step 2. After pressing RF CHANNEL in step 2, press PROGRAM +/– while the RF channel is displayed, so that another RF channel appears. Then tune the TV to the new RF channel so that a clear picture appears.

Note

- If you set the wrong TV system, you may have no sound or sound may be distorted.

If your TV has a Scart (EURO-AV) connector



1 I/⏻

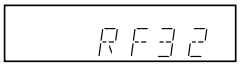
Press I/⏻ (on/standby) to turn on the VCR.

2 AUTO SET UP / RF CHANNEL

Press RF CHANNEL on the VCR lightly.

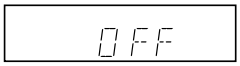
The factory-preset RF channel appears in the display window.

The VCR signal is output through this channel to the TV.



3 PROGRAM –/+

Press PROGRAM +/– to set the RF channel to OFF, and press RF CHANNEL again.

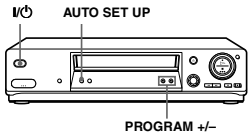


AUTO SET UP / RF CHANNEL

RF channel set up is complete.

Step 5 : Setting up the VCR with the Auto Set Up function

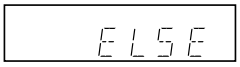
Before using the VCR for the first time, set up the VCR using the Auto Set Up function. With this function, you can set the language for the on-screen display, TV channels, guide channels for the ShowView system*, and VCR clock* automatically.



1 AUTO SET UP / RF CHANNEL

Hold down AUTO SET UP on the VCR for more than three seconds.

The VCR automatically turns on, and the country abbreviation appears in the display window.



2 PROGRAM –/+

Press PROGRAM +/– to select the abbreviation of your country from the table on page 23.

For some countries, there is a selection of languages to choose from.

If your country does not appear, select ELSE.

3 AUTO SET UP / RF CHANNEL

Press AUTO SET UP lightly.

The VCR starts searching for all of the receivable channels and presets them according to the TV system you selected in “Tuning your TV to the VCR” on page 19.

If you want to change the order of the channels or disable unwanted programme positions, see “Changing/disabling programme positions” on page 34.

If you use the SMARTLINK connection (not available on SLV-SE610N/K), the Preset Download function starts and the ↻ indicator flashes in the display window during download.

For SLV-SE710N/K, SX710N/K, and SE810N/K:
After the search or download is complete, the current time appears in the display window for any stations that transmit a time signal.

For SLV-SE610N/K:
When no more receivable channels can be found, presetting stops and “SET UP” disappears from the display window.

The abbreviations of the countries and languages are as follows:

Abbreviation	Country	Language
CZ	Czecho	Czech
HUN	Hungary	Hungarian
PL	Poland	Polish
SK	Slovakia	Slovak
TR	Turkey	Turkish
RUS	Russia	Russian
ELSE	Other countries	English

To cancel the Auto Set Up function

Press AUTO SET UP.

Tip

- If you want to change the language for the on-screen display from the one preset in the Auto Set Up function, see page 29.

continued

Notes

- If you stop the Auto Set Up function during step 3, you must repeat set up from step 1.
- Whenever you operate the Auto Set Up function, some of the settings (ShowView*, timer, etc.) will be reset. If this happens, you have to set them again.

* not available on SLV-SE610N/K

Step 6 : Setting the clock

You must set the time and date on the VCR to use the timer features properly.

The Auto Clock Set function (not available on SLV-SE610N/K) works only if a station in your area is broadcasting a time signal. If the Auto Set Up function did not set the clock correctly for your local area, try another station for the Auto Clock Set function.

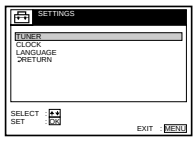
Setting the clock manually

Before you start…

- Turn on the VCR and the TV.
- Set the TV to the video channel.
- Refer to "Index to parts and controls" for button locations.

1 MENU

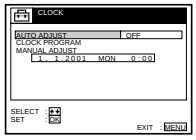
Press MENU, then press ↑/↓ to highlight SETTINGS and press OK.



2

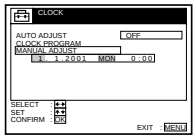
Press ↑/↓ to highlight CLOCK, then press OK.

For SLV-SE610N/K, only the clock setting menu appears. Skip the next step and go to step 4.



3

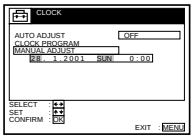
Press ↑/↓ to highlight MANUAL ADJUST, then press OK.



continued

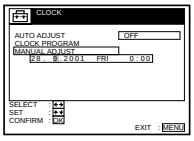
4

Press ↑/↓ to set the day.



5

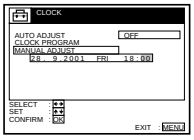
Press → to highlight the month and set the month pressing ↑/↓.



6

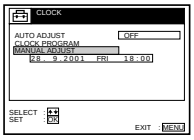
Set the year, hour, and minutes in sequence, pressing → to highlight the item to be set, and press ↑/↓ to select the digits.

The day of the week is set automatically.



7

Press OK to start the clock.



8 MENU

Press MENU to exit the menu.

Tips

- To change the digits while setting, press ← to return to the item to be changed, and select the digits by pressing ↑/↓.
- If you want to return to the previous menu, highlight RETURN and press OK.

Note

- The menu disappears automatically if you don't proceed for more than a few minutes.

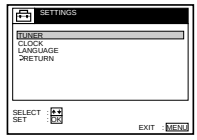
Changing the station for the Auto Clock Set function (not available on SLV-SE610N/K)

Before you start…

- Turn on the VCR and the TV.
- Set the TV to the video channel.
- Refer to "Index to parts and controls" for button locations.

1 MENU

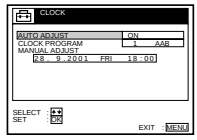
Press MENU, then press ↑/↓ to highlight SETTINGS and press OK.



2

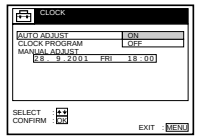
Press ↑/↓ to highlight CLOCK, then press OK.

AUTO ADJUST is highlighted.



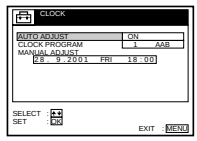
3

Press OK.



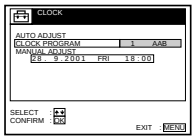
4

Press ↑/↓ to highlight ON, then press OK.



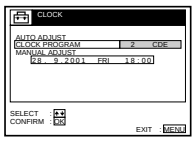
continued

5 Press ↓ to highlight CLOCK PROGRAM, then press OK.



6 Press ↑/↓ repeatedly until the programme position of the station that carries a time signal appears.

If the VCR does not receive a time signal from any station, AUTO ADJUST returns to OFF automatically.



7 MENU

Press MENU to exit the menu.

Tips

- If you set AUTO ADJUST to ON, the Auto Clock Set function is activated whenever the VCR is turned off. The time is adjusted automatically by making reference to the time signal from the station whose programme position is displayed in the "CLOCK PROGRAM" row. If you do not need the Auto Clock Set, select OFF.
- If you want to return to the previous menu, highlight RETURN and press OK.

Note

- The menu disappears automatically if you don't proceed for more than a few minutes.

Selecting a language

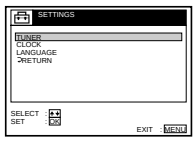
You can change the on-screen display language from the one you selected with the Auto Set Up function.

Before you start…

- Turn on the VCR and the TV.
- Set the TV to the video channel.
- Refer to "Index to parts and controls" for button locations.

1 MENU

Press MENU, then press ↑/↓ to highlight SETTINGS and press OK.



2 Press ↑/↓ to highlight LANGUAGE, then press OK.

3 Press ↑/↓ to highlight the desired language, then press OK.

4 MENU

Press MENU to exit the menu.

Tip

- If you want to return to the previous menu, highlight RETURN and press OK.

Note

- The menu disappears automatically if you don't proceed for more than a few minutes.

Presetting channels

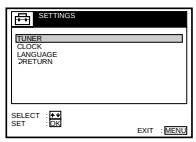
If some channels could not be preset using the Auto Set Up function, you can preset them manually.

Before you start…

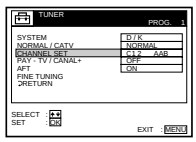
- Turn on the VCR and the TV.
- Set the TV to the video channel.
- Refer to "Index to parts and controls" for button locations.

1 MENU

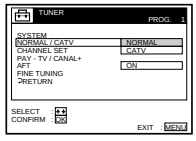
Press MENU, then press ↑/↓ to highlight SETTINGS and press OK.



2 Press ↑/↓ to highlight TUNER, then press OK.

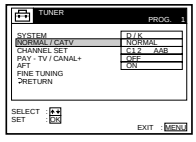


3 Press ↑/↓ to highlight NORMAL/CATV, then press OK.



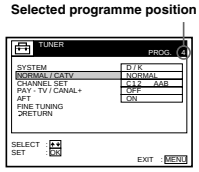
4 Press ↑/↓ to highlight NORMAL, then press OK.

To preset CATV (Cable Television) channels, select CATV.

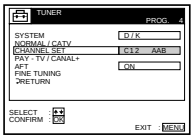


5 PROG +/–

Press PROG +/– to select the programme position.

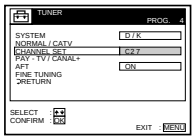


6 Press ↑/↓ to highlight CHANNEL SET, then press OK.



continued

7 Press ↑/↓ repeatedly until the channel you want is displayed.

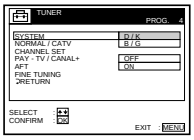


The channels appear in the following order:

B/G TV system		D/K TV system	
Channel number in the CHANNEL SET field	**Receivable Channel**	**Channel number in the CHANNEL SET field**	**Receivable Channel**
C02	E2	C02	R1
C03	E3	C05	R6
C04	E4	C06	R7
C05	E5	C12	R12
C06	E6	C13	R2
C07	E7	C14	R3
C08	E8	C15	R4
C09	E9	C16	R5
C10	E10	C17	R8
C11	E11	C18	R9
C12	E12	C19	R10
C21–C69	E21–E69	C20	R11
S01–S41	S1–S41	C21–C69	R21–R69
S42–S46	S01–S05		

If you know the number of the channel you want, press the programme number buttons. For example, for channel 5, first press "0" and then press "5."

8 If the TV sound is distorted or noisy, press ↑/↓ to highlight SYSTEM and press OK. Then press ↑/↓ to select B/G or D/K so that you get better sound.



9 To preset another programme position, repeat steps 5 through 7.

10 Press MENU to exit the menu.

If the picture is not clear

Normally, the Auto Fine Tuning (AFT) function automatically tunes in channels clearly. However, if the picture is not clear, you may also use the manual tuning function.

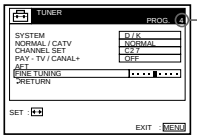
1 Press PROG +/– or the programme number buttons to select the programme position for which you cannot obtain a clear picture.

2 Press MENU, then select SETTINGS and press OK.

3 Select TUNER, then press OK.

4 Select FINE TUNING, then press OK.

The fine tuning meter appears.



Selected programme position

5 Press ←/→ to get a clearer picture, then press MENU to exit the menu.

Note that the AFT (Auto Fine Tuning) setting switches to OFF.

Tip

- If you want to return to the previous menu, highlight RETURN and press OK.

Notes

- The menu disappears automatically if you don't proceed for more than a few minutes.
- When adjusting FINE TUNING, the menu may become difficult to read due to interference from the picture being received.

Changing/disabling programme positions

After setting the channels, you can change the programme positions as you like. If any programme positions are unused or contain unwanted channels, you can disable them.

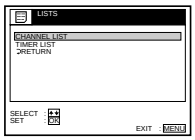
You can also change the station names (not available on SLV-SE610N/K). If the station names are not displayed, you can enter them manually.

Changing programme positions

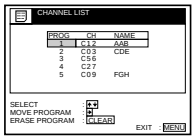
Before you start…

- Turn on the VCR and the TV.
- Set the TV to the video channel.
- Refer to "Index to parts and controls" for button locations.

1 Press MENU, then press ↑/↓ to highlight LISTS and press OK.

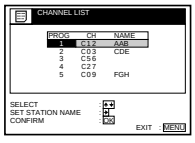


2 Press ↑/↓ to highlight CHANNEL LIST, then press OK.



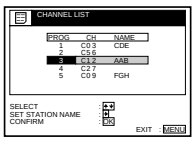
3 Press ↑/↓ to highlight the row which you want to change the programme position, then press ➡.

To display other pages for programme positions 6 to 60, press ↑/↓ repeatedly.



4 Press ↑/↓ until the selected channel row moves to the desired programme position.

The selected channel is inserted at the new programme position and the intermediate channels are displaced to fill the gap.



5 Press OK to confirm the setting.

6 To change the programme position of another station, repeat steps 3 through 5.

7 Press MENU to exit the menu.

Tip

- If you want to return to the previous menu, highlight RETURN and press OK.

Note

- The menu disappears automatically if you don't proceed for more than a few minutes.

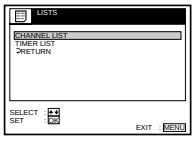
Disabling unwanted programme positions

After presetting channels, you can disable unused programme positions. The disabled positions will be skipped later when you press the PROG +/– buttons.

Before you start…

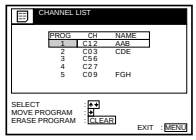
- Turn on the VCR and the TV.
- Set the TV to the video channel.
- Refer to "Index to parts and controls" for button locations.

1 Press MENU, then press ↑/↓ to highlight LISTS, and press OK.

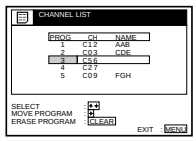


continued

2 Press ↑/↓ to highlight CHANNEL LIST, then press OK.



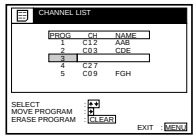
3 Press ↑/↓ to highlight the row which you want to disable.



4 CLEAR

Press CLEAR.

The selected row will be cleared as shown on the right.



5 Repeat steps 3 and 4 for any other programme positions you want to disable.

6 MENU

Press MENU to exit the menu.

Tip

- If you want to return to the previous menu, highlight RETURN and press OK.

Notes

- The menu disappears automatically if you don't proceed for more than a few minutes.
- Be sure to select the programme position you want to disable correctly. If you disable a programme position by mistake, you need to reset that channel manually.

Changing the station names (not available on SLV-SE610N/K)

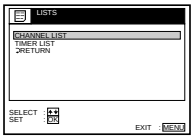
You can change or enter the station names (up to 5 characters). The VCR must receive channel information (for instance, SMARTLINK information) for station names to appear automatically.

Before you start…

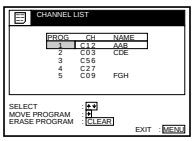
- Turn on the VCR and the TV.
- Set the TV to the video channel.
- Refer to "Index to parts and controls" for button locations.

1 MENU

Press MENU, then press ↑/↓ to highlight LISTS and press OK.

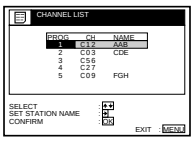


2 Press ↑/↓ to highlight CHANNEL LIST, then press OK.

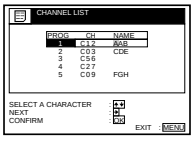


3 Press ↑/↓ to highlight the row which you want to change or enter the station name, then press →.

To display other pages for programme positions 6 to 60, press ↑/↓ repeatedly.



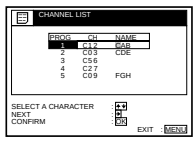
4 Press →.



continued

5 Enter the station name.

1 Press ↑/↓ to select a character. Each time you press ↑, the character changes as shown below.
A → B → … → Z → a → b → … → z → 0 → 1 → … → 9 → (symbols) → (blank space) → A



2 Press → to set the next character.
The next space is highlighted.
To correct a character, press ←/→ until the character you want to correct is highlighted, then reset it.

You can set up to 5 characters for the station name.

6 Press OK to confirm the new name.

7 MENU

Press MENU to exit the menu.

Tip

- If you want to return to the previous menu, highlight RETURN and press OK.

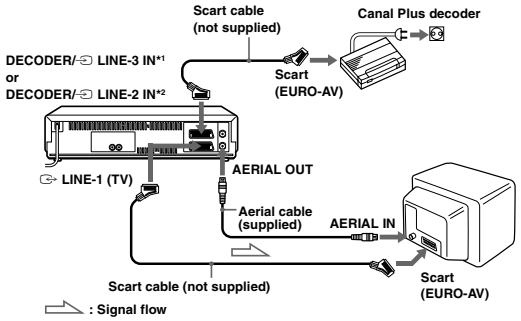
Notes

- The menu disappears automatically if you don't proceed for more than a few minutes.
- If you enter a symbol in step 5, it will appear as a blank space in the display window.

Setting the Canal Plus decoder (not available on SLV-SE610N/K)

You can watch or record Canal Plus programmes if you connect a decoder (not supplied) to the VCR.

Connecting a decoder



Setting Canal Plus channels

To watch or record Canal Plus programmes, set your VCR to receive the channels using the on-screen display.

In order to set the channels correctly, be sure to follow all of the steps below.

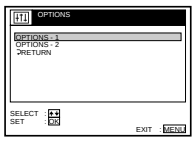
Before you start…

- Turn on the VCR, the TV, and the decoder.
- Set the TV to the video channel.
- Refer to "Index to parts and controls" for button locations.

continued

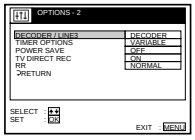
1 MENU

Press MENU, then press ↑/↓ to highlight OPTIONS and press OK.



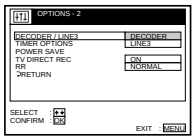
2 PLAY OK

Press ↑/↓ to highlight OPTIONS-2, then press OK.



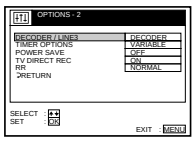
3 PLAY OK

Press ↑/↓ to highlight DECODER/LINE3*1 (or DECODER/LINE2*2), then press OK.



4 PLAY OK

Press ↑/↓ to highlight DECODER, then press OK.



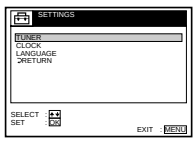
5 MENU

Press MENU to exit the menu.

The menu disappears from the TV screen.

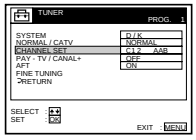
6 MENU

Press MENU again. Then press ↑/↓ to highlight SETTINGS and press OK.



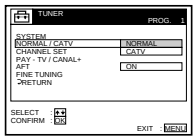
7 PLAY OK

Press ↑/↓ to highlight TUNER, then press OK.



8 PLAY OK

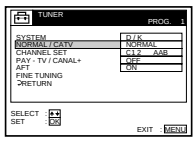
Press ↑/↓ to highlight NORMAL/CATV, then press OK.



9 PLAY OK

Press ↑/↓ to highlight NORMAL, then press OK.

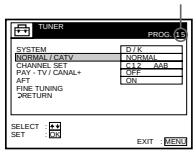
To preset CATV (Cable Television) channels, select CATV.



10 • PROG

Press PROG +/– to select the desired programme position.

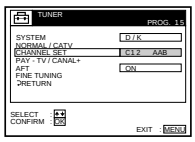
Selected programme position



continued

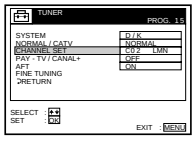
11 PLAY OK

Press ↑/↓ to highlight CHANNEL SET, then press OK.



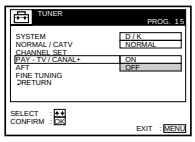
12 PLAY OK

Press ↑/↓ to select the Canal Plus channels, then press OK.



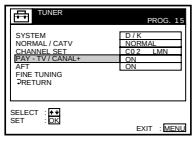
13 PLAY OK

Press ↑/↓ to highlight PAY-TV/CANAL+, then press OK.



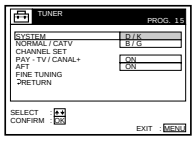
14 PLAY OK

Press ↑/↓ to highlight ON, then press OK.



15 PLAY OK

If the TV sound is distorted or noisy, press ↑/↓ to highlight SYSTEM and press OK. Then press ↑/↓ to select B/G or D/K so that you get better sound.



16 MENU

Press MENU to exit the menu.

Tip

- If you want to return to the previous menu, highlight RETURN and press OK.

Notes

- The menu disappears automatically if you don't proceed for more than a few minutes.
- To superimpose subtitles while watching Canal Plus programmes, make both decoder-VCR and VCR-TV connections using 21-pin Scart cables that are compatible with the RGB signals. You cannot record subtitles on the VCR.
- When you watch Canal Plus programmes through the RFU input of the TV, press ⊜ TV/VIDEO so that the VIDEO indicator appears in the display window.
- If POWER SAVE is set to FULL, you cannot watch or record Canal Plus programmes during standby mode. Set POWER SAVE in the OPTIONS-2 menu to OFF or PARTIAL.

*1 SLV-SE810N/K only

*2 SLV-SE710N/K and SX710N/K only

Playing a tape

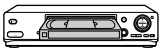
Before you start...

- Refer to "Index to parts and controls" for button locations.

1 Turn on your TV and set it to the video channel.

2 Insert a tape.

The VCR turns on and starts playing automatically if you insert a tape with its safety tab removed.



3

Press ▷ PLAY.

When the tape reaches the end, it will rewind automatically.

Additional tasks

To	Press
Stop play	■ STOP
Pause play	❚❚ PAUSE
Resume play after pause	❚❚ PAUSE or ▷ PLAY
Fast-forward the tape	▶▶ FF during stop
Rewind the tape	◀◀ REW during stop
Eject the tape	⏏ EJECT

To set the colour system

If the playback picture has no colour, or streaks appear during playback, set COLOUR SYSTEM in the OPTIONS-1 menu to conform to the system that the tape was recorded in (see page 85). (Normally set the option to AUTO.)

To use the time counter

Press CLEAR at the point on the tape that you want to find later. The counter in the display window resets to "0:00:00." Search for the point afterwards by referring to the counter.

To display the counter on the TV screen, press 1+ DISPLAY.

Notes

- The counter resets to "0:00:00" whenever a tape is reinserted.
- The counter stops counting when it comes to a portion with no recording.
- The time counter does not appear on the TV screen when using an NTSC-recorded tape.
- Depending on your TV, the following may occur while playing an NTSC-recorded tape:
  - The picture becomes black and white.
  - The picture shakes.
  - No picture appears on the TV screen.
  - Black streaks appear horizontally on the TV screen.
  - The colour density increases or decreases.
- If you play back a tape in LP or EP mode with the NTSC system, the sound becomes monaural.
- The picture's colour may be affected when playing a MESECAM-recorded tape in the LP mode.
- While setting the menu on the TV screen, buttons for playback on the remote commander do not function.

Starting playback automatically with one button (One Touch Play) (not available on SLV-SE610N/K)

If you use the SMARTLINK connection, you can turn on the VCR and the TV, set the TV to the video channel, and start playback automatically with one button.

1 Insert a tape.

The VCR automatically turns on.

If you insert a tape with its safety tab removed, the TV turns on and switches to the video channel. Playback starts automatically.

2 Press ▷ PLAY.

The TV turns on and switches to the video channel automatically. Playback starts.

Tip

- When there already is a tape in the VCR, the VCR and the TV turn on, the TV is set to the video channel, and playback starts automatically in one sequence when you press ▷ PLAY.

Note

- When you use the One Touch Play function, leave the TV on or in the standby mode.

Recording TV programmes

Before you start...

- Refer to "Index to parts and controls" for button locations.

1 Turn on your TV and set it to the video channel.

To record from a decoder, turn it on.

2 Insert a tape with its safety tab in place.

3

Press PROG +/– to select the programme position or station name* you want to record.

4

Press SP/LP to select the tape speed, SP or LP.

LP (Long Play) provides recording time twice as long as SP. However, SP (Standard Play) produces better picture and audio quality.

5

Press ● REC to start recording.

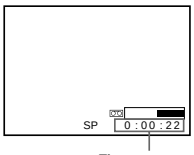
The recording indicator lights up red in the display window.

To stop recording

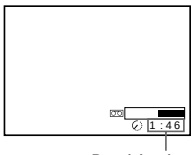
Press ■ STOP.

To check the remaining time

Press 1+ DISPLAY. With the display on, press COUNTER/REMAIN to check the remaining time. Each time you press COUNTER/REMAIN, the time counter and the remaining time appear alternately. The ⏲ indicator indicates the remaining time.



Time counter



Remaining time

In order to get an accurate remaining time indication, be sure TAPE LENGTH in the OPTIONS-1 menu is set according to the tape type you use (see page 85).

To watch another TV programme while recording

1 Press TV/VIDEO to turn off the VIDEO indicator in the display window.

2 Select another programme position on the TV.

To save a recording

To prevent accidental erasure, break off the safety tab as illustrated. To record on the same tape again, cover the tab hole with adhesive tape.

Safety tab

Tips

- To select a programme position, you can use the programme number buttons on the remote commander. For two-digit numbers, press the -/-- (ten's digit) button followed by the programme number buttons.
- If you connect additional equipment to a LINE connector or jack, you can select the input signal using the INPUT SELECT or PROG +/– buttons.
- The 1+ DISPLAY information appears on the TV screen indicating information about the tape, but the information won't be recorded on the tape.
- If you don't want to watch TV while recording, you can turn off the TV. When using a decoder, make sure to leave it on.

continued

Notes

- The DISPLAY information does not appear during still (pause) mode or slow-motion playback.
- The DISPLAY information will not appear while playing an NTSC-recorded tape.
- If a tape has portions recorded in both PAL (MESECAM) and NTSC systems, the time counter reading will not be correct. This discrepancy is due to the difference between the counting cycles of the two video systems.
- You cannot watch a Canal Plus programme while recording another Canal Plus programme.*
- When you insert a non-standard commercially available tape, the remaining time may not be correct.
- The remaining time is intended for rough measurement only.
- About 30 seconds after the tape begins playback, the tape remaining time will be displayed.
- The station name* may not appear if the VCR does not receive station name information signals.

* not available on SLV-SE610N/K

Recording what you are watching on the TV (TV Direct Rec) (not available on SLV-SE610N/K)

If you use the SMARTLINK connection, you can easily record what you are watching on the TV (other than tapes being played on the VCR).

1 Insert a tape with its safety tab in place.

2 Press ● REC while you are watching a TV programme or external source.

The VCR automatically turns on, then the TV indicator lights up and the VCR starts recording what you are watching on the TV.

Tips

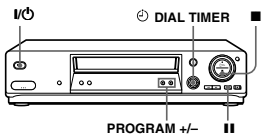
- The TV indicator appears in the display window after you press ● REC in some situations such as:
  - when you are watching a source connected to the TV's line input, or
  - when the TV tuner preset data for the programme position is different from the data in the VCR tuner preset.
- If there is a tape with its safety tab in place in the VCR, the VCR automatically turns on and starts recording what you are watching on the TV when you press ● REC.
- You can turn the TV Direct Rec function ON and OFF in the OPTIONS-2 menu (see page 86).

Notes

- You cannot record what you are watching using this method when the VCR is in the following modes; pause, timer standby, tuner preset, Auto Set Up, and recording.
- When the TV indicator is lit in the display window, do not turn off the TV nor change the TV programme position. When the TV indicator is not lit, the VCR continues recording the programme even if you change the TV programme position on the TV.

Recording TV programmes using the Dial Timer
(SLV-SE810N/K only)

The Dial Timer function allows you to make timer recordings of programmes without turning on your TV. Set the recording timer to record up to eight programmes, including settings made with other timer methods, that will be broadcast within the next month. The recording start time and recording stop time can be set at one minute intervals.



Before you start...

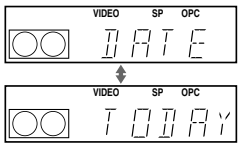
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- To record from a decoder, turn it on.
- Refer to "Index to parts and controls" for button locations.

1 DIAL TIMER

Press DIAL TIMER.

"DATE" and "TODAY" appear alternately in the display window.

If the date and time are not set, "DAY" will appear. See step 2 in the following section, "To set the clock" to set the date and time.



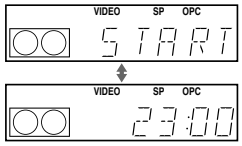
2 DIAL TIMER

Turn DIAL TIMER to set the recording date.

3 DIAL TIMER

Press DIAL TIMER.

"START" and the current time appear alternately in the display window.

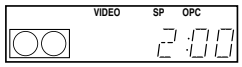


4 DIAL TIMER

Turn DIAL TIMER to set the recording start time.

You can set the recording start time in 15 minute intervals or adjust the time in one minute intervals by pressing the PROGRAM +/– buttons.

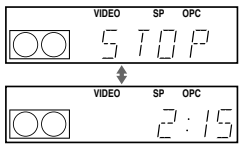
PROGRAM – +



5 DIAL TIMER

Press DIAL TIMER.

"STOP" and the recording stop time appear alternately in the display window.

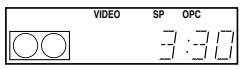


6 DIAL TIMER

Turn DIAL TIMER to set the recording stop time.

You can set the recording stop time in 15 minute intervals or adjust the time in one minute intervals by pressing the PROGRAM +/– buttons.

PROGRAM – +

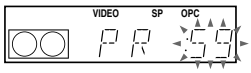


continued

7 ⏲DIAL TIMER

Press ⏲ DIAL TIMER.

The programme position or station name appears in the display window.



8 ⏲DIAL TIMER

Turn ⏲ DIAL TIMER to set the programme position.

To record from a decoder or other source connected to one or more of the LINE inputs, turn ⏲ DIAL TIMER or press INPUT SELECT to display the connected line in the display window.

INPUT SELECT

9 ⏲DIAL TIMER

Press ⏲ DIAL TIMER to complete the setting.

"OK" appears in the display window for about five seconds.

The ⏲ indicator appears in the display window and the VCR stands by for recording.

To record from a decoder or other source, leave the connected equipment switched on.

To return to the previous step

To return to the previous step, press the PROGRAM + and – buttons on the VCR at the same time during any of the Dial Timer settings.

To stop recording

To stop the VCR while recording, press ■ STOP.

To use the VCR after setting the timer

To use the VCR before a recording begins, just press I/⏻. The ⏲ indicator turns off and the VCR switches on. Remember to press I/⏻ to reset the VCR to recording standby after using the VCR.

You can also do the following tasks while the VCR is recording:

- Reset the counter (page 44).
- Display tape information on the TV screen (page 47).
- Check the timer settings (page 68).
- Watch another TV programme (page 47).

To set the clock

1 Turn ⏲ DIAL TIMER so that "CLOCK" appears in the display window.

2 Press ⏲ DIAL TIMER.
"DAY" appears in the display window.

3 Turn ⏲ DIAL TIMER to set the day.

4 Press ⏲ DIAL TIMER.
"MONTH" appears in the display window.

5 Turn and press ⏲ DIAL TIMER to set the month, and then the year.
After you set the year, "CLOCK" appears in the display window again.

6 Turn and press ⏲ DIAL TIMER to set the hour and minute.

7 When you have finished setting the time, press ⏲ DIAL TIMER to start the clock.

Tips

- To cancel a Dial Timer setting, press ■ (stop) on the VCR while you are making the setting.
- The programme is recorded in the current tape speed mode. To change the tape speed, press SP/LP before you complete the setting in step 9.
- When you are recording a programme in the SP mode and the remaining tape becomes shorter than the recording time, the tape speed is automatically changed to the LP mode. Note that some interference will appear on the picture at the point the tape speed is changed. If you want to keep the same tape speed, set AUTO LONG PLAY to OFF in the OPTIONS-1 menu (page 85).
- To check, change, or cancel the programme setting, see "Checking/changing/cancelling timer settings" (page 68).

Notes

- If eight programmes have already been set using the ShowView system or the TIMER menu, "FULL" appears in the display window for about five seconds.
- The ⏲ indicator flashes in the display window when you complete the setting in step 9 with no tape inserted.
- If you set the clock using the Auto Clock Set function and AUTO ADJUST is set to ON, the clock will adjust itself to the incoming time signal regardless of adjustments made with the Dial Timer. Be sure you have set the Auto Clock Set correctly.
- The station name may not appear if the VCR does not receive station name information signals.

continued

About the Demonstration Mode

The Dial Timer function has a Demonstration Mode that allows the user, such as a salesperson, to enter more than eight examples of timer settings when demonstrating the use of the Dial Timer. It cancels the FULL notice which appears if eight programmes have already been set. Do not use the Demonstration Mode for making timer recordings. Doing so may cause the settings to be inaccurate.

To activate the Demonstration Mode

Press ❚❚ (pause) on the VCR while turning the ⏲ DIAL TIMER. "DEMO" appears in the display window for a few seconds.

To cancel the Demonstration Mode

Turn the power off and unplug the mains lead. Although the Demonstration Mode is cancelled, the timer settings entered while using the Demonstration Mode will remain. Be sure to manually cancel the timer settings before you use the Dial Timer or any other timer method after reconnecting the mains lead (see page 68).

Recording TV programmes using the ShowView system
(not available on SLV-SE610N/K)

The ShowView system is the feature that simplifies programming the VCR to make timer recordings. Just enter the ShowView number listed in the TV programme guide. The date, times, and programme position of that programme are set automatically. You can preset a total of eight programmes, including settings made with other timer methods.

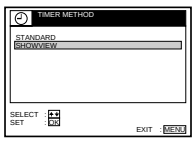
Before you start…

- Check that the VCR clock is set to the correct time and date.
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- To record from a decoder, turn it on.
- Turn on your TV and set it to the video channel.
- Set TIMER OPTIONS to SHOWVIEW or VARIABLE in the OPTIONS-2 menu (see page 85).
- Refer to "Index to parts and controls" for button locations.

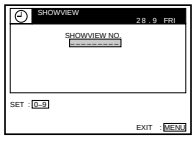
1 TIMER

Press ⏲ TIMER.

- When you set TIMER OPTIONS to VARIABLE:
  The TIMER METHOD menu appears on the TV screen. Press ↑/↓ to select SHOWVIEW, then press OK.



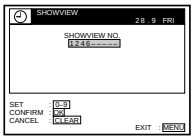
- When you set TIMER OPTIONS to SHOWVIEW:
  The SHOWVIEW menu appears on the TV screen.



continued

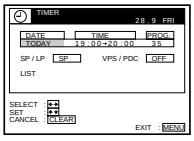
2 Press the programme number buttons to enter the ShowView number.

If you make a mistake, press CLEAR and re-enter the correct number.



3 Press OK.

The date, start and stop times, programme position or station name, tape speed, and VPS/PDC setting appear on the TV screen.



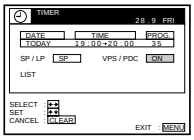
- If "– –" appears in the "PROG." (programme) column (this may happen for local broadcasts), you have to set the appropriate programme position manually. Press ↑/↓ to select the desired programme position.
  To record from a decoder or other source connected to one or more of the LINE inputs, press INPUT SELECT to display the connected line in the "PROG." position.
  You will only have to do this operation once for the referred channel. The VCR will then store your setting.

If the information is incorrect, press CLEAR to cancel the setting.

4 If you want to change the date, tape speed, and the VPS/PDC setting:

1 Press ←/→ to highlight the item you want to change.

2 Press ↑/↓ to reset it.



- To record the same programme every day or the same day every week, see "Daily/weekly recording" on page 57.
- To use the VPS/PDC function, set VPS/PDC to ON. For details of the VPS/PDC function, see "Timer recording with VPS/PDC signals" on page 57.

5 Press MENU to exit the menu.

6 Press I/⏻ to turn off the VR.

The ⏲ indicator appears in the display window and the VCR stands by for recording.

To record from a decoder or other source, leave the connected equipment switched on.

To stop recording

To stop the VCR while recording, press ■ STOP.

Daily/weekly recording

In step 4 above, press ↓ to select the recording pattern. Each time you press ↓, the indication changes as shown below. Press ↑ to change the indication in reverse order.

TODAY → SUN-SAT (Sunday to Saturday) → MON-SAT (Monday to Saturday) → MON-FRI (Monday to Friday) → SAT (every Saturday) ..... → MON (every Monday) → SUN (every Sunday) → 1 month later → (dates count down) → TOMORROW → TODAY

Timer recording with VPS/PDC signals

Some broadcast systems transmit VPS (Video Programme System) or PDC (Programme Delivery Control) signals with their TV programmes. These signals ensure that your timer recordings are made regardless of broadcast delays, early starts, or broadcast interruptions (when the VPS or PDC indicator in the display window is lit).

To use the VPS/PDC function, set VPS/PDC to ON in step 4 above. You can also use the VPS/PDC function for a source connected to one or more of the LINE inputs.

To record satellite broadcasts

If you connect a satellite tuner and the VCR, you can record satellite programmes.

1 Turn on the satellite tuner.

2 On the satellite tuner, select the satellite programme for which you want to make a timer setting.

3 Follow steps 1 through 6 above.

4 Keep the satellite tuner turned on until the VCR finishes recording the satellite programme for which you have made a timer setting.

continued

To use the VCR after setting the timer

To use the VCR before a recording begins, just press I/⏻. The ⏲ indicator turns off and the VCR switches on. Remember to press I/⏻ to reset the VCR to recording standby after using the VCR.

You can also do the following tasks while the VCR is recording:

- Reset the counter (page 44).
- Display tape information on the TV screen (page 47).
- Check the timer settings (page 68).
- Watch another TV programme (page 47).

Tips

- To set the programme position, you can also use the PROG +/– or programme number buttons.
- To set the programme position with a two digit number, press -/-- (ten's digit) button followed by the programme number buttons.
- To set the line input video source, you can also use the PROG +/– buttons.
- To set the tape speed, you can also use the SP/LP button.
- When you are recording a programme in the SP mode and the remaining tape becomes shorter than the recording time, the tape speed is automatically changed to the LP mode. Note that some interference will appear on the picture at the point the tape speed is changed. If you want to keep the same tape speed, set AUTO LONG PLAY to OFF in the OPTIONS-1 menu (page 85).
- To check, change, or cancel the programme setting, press ←/→ to choose LIST, then press OK in step 4. For details, see step 3 in "Checking/changing/cancelling timer settings" (page 68).

Notes

- If the VPS/PDC signal is too weak or the broadcasting station failed to transmit VPS/PDC signals, the VCR will start recording at the set time without using the VPS/PDC function.
- The ⏲ indicator flashes in the display window when you press I/⏻ with no tape inserted.
- When you set TIMER OPTIONS to STANDARD in the OPTIONS-2 menu, the SHOWVIEW menu does not appear on the TV screen. Select SHOWVIEW or VARIABLE.
- The VPS/PDC function is automatically set to OFF for the timer recording of a satellite programme.
- The station name may not appear if the VCR does not receive station name information signals.

Recording TV programmes using the timer

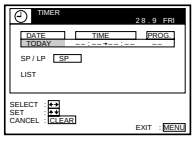
You can preset a total of eight programmes, including settings made with other timer methods.

Before you start…

- Check that the VCR clock is set to the correct time and date.
- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- To record from a decoder, turn it on.
- Turn on your TV and set it to the video channel.
- Set TIMER OPTIONS to STANDARD or VARIABLE in the OPTIONS-2 menu (see page 85).*
- Refer to "Index to parts and controls" for button locations.

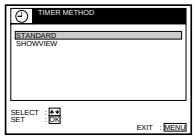
1 Press ⏲ TIMER.

For SLV-SE610N/K:
The TIMER menu appears on the TV screen.

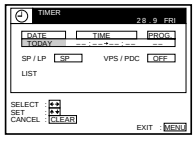


For SLV-SE710N/K, SX710N/K, and SE810N/K:

- When you set TIMER OPTIONS to VARIABLE:
  The TIMER METHOD menu appears on the TV screen. Press ↑/↓ to select STANDARD, then press OK.



- When you set TIMER OPTIONS to STANDARD:
  The TIMER menu appears on the TV screen.



continued

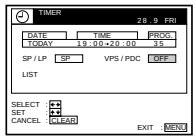
2

INPUT SELECT

Set the date, start and stop times, programme position or station name*, tape speed, and VPS/PDC function*:

1 Press ➡ to highlight each item in turn.

2 Press ⬆/⬇ to set each item.



To correct a setting, press ⬅ to return to that setting and reset.

- To record the same programme every day or the same day every week, see "Daily/weekly recording" on page 60.
- To use the VPS/PDC function*, set VPS/PDC to ON. For details about the VPS/PDC function, see "Timer recording with VPS/PDC signals" on page 57.
- To record from a decoder or other source connected to one or more of the LINE inputs, press INPUT SELECT to display the connected line in the "PROG." position.

3

MENU

Press MENU to exit the menu.

4

•I / ⏻

Press I/⏻ to turn off the VCR.

The ⏲ indicator appears in the display window and the VCR stands by for recording.

To record from a decoder or other source, leave the connected equipment switched on.

To stop recording

To stop the VCR while recording, press ■ STOP.

Daily/weekly recording

In step 2 above, press ⬇ to select the recording pattern. Each time you press ⬇, the indication changes as shown below. Press ⬆ to change the indication in reverse order.

TODAY → SUN-SAT (Sunday to Saturday) → MON-SAT (Monday to Saturday) → MON-FRI (Monday to Friday) → SAT (every Saturday) ..... → MON (every Monday) → SUN (every Sunday) → 1 month later → (dates count down) → TOMORROW → TODAY

Notes

- When setting the timer with VPS/PDC signals, enter the start and stop times exactly as indicated in the TV programme guide. Otherwise, the VPS/PDC function* won't work.
- If the VPS/PDC signal is too weak or the broadcasting station failed to transmit VPS/PDC signals, the VCR will start recording at the set time without using the VPS/PDC function*.
- The ⏲ indicator flashes in the display window when you press I/⏻ with no tape inserted.
- The VPS/PDC function* is automatically set to OFF for the timer recording of a satellite programme.
- The station name* may not appear if the VCR does not receive station name information signals.

* not available on SLV-SE610N/K

To record satellite broadcasts

If you connect a satellite tuner and the VCR, you can record satellite programmes.

1 Turn on the satellite tuner.

2 On the satellite tuner, select the satellite programme for which you want to make a timer setting.

3 Follow steps 1 through 4 above.

4 Keep the satellite tuner turned on until the VCR finishes recording the satellite programme for which you have made a timer setting.

To use the VCR after setting the timer

To use the VCR before a recording begins, just press I/⏻. The ⏲ indicator turns off and the VCR switches on. Remember to press I/⏻ to reset the VCR to recording standby after using the VCR.

You can also do the following tasks while the VCR is recording:

- Reset the counter (page 44).
- Display tape information on the TV screen (page 47).
- Check the timer settings (page 68).
- Watch another TV programme (page 47).

Tips

- To set the programme position, you can also use the PROG +/– or programme number buttons.
- To set the programme position with a two digit number, press -/-- (ten's digit) button followed by the programme number buttons.
- To set the line input video source, you can also use the PROG +/– buttons.
- To set the tape speed, you can also use the SP/LP button.
- When you are recording a programme in the SP mode and the remaining tape becomes shorter than the recording time, the tape speed is automatically changed to the LP mode. Note that some interference will appear on the picture at the point the tape speed is changed. If you want to keep the same tape speed, set AUTO LONG PLAY to OFF in the OPTIONS-1 menu (page 85).
- Even if you set TIMER OPTIONS* to SHOWVIEW in the OPTIONS-2 menu, you can set the timer manually. Press MENU to select TIMER, then go to step 2.
- To check, change, or cancel the programme setting, press ⬅/➡ to choose LIST, then press OK in step 2. For details, see step 3 in "Checking/changing/cancelling timer settings" (page 68).

continued

Additional Operations

Playing/searching at various speeds

Before you start…

- Refer to "Index to parts and controls" for button locations.

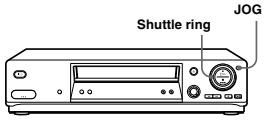
Playback options	Operation
View the picture during fast-forward or rewind	During fast-forward, hold down ▶▶ FF/▶▶. During rewind, hold down ◀◀ REW/◀◀.
Play at high speed	• During playback, press ▶▶ FF or ◀◀ REW on the remote commander. • During playback, hold down ▶▶ FF/▶▶ or ◀◀ REW/◀◀. When you release the button, normal playback resumes.
Play at twice the normal speed	During playback, press ×2.
Play in slow motion	During playback, press I► SLOW.
Play frame by frame	During pause, press ▶▶ FF or ◀◀ REW on the remote commander. Hold down ▶▶ FF or ◀◀ REW to play one frame each second.
Rewind and start play	During stop, press ▷ (play) on the VCR while holding down ◀◀ on the VCR.

To resume normal playback

Press ▷ PLAY.

Using the shuttle ring (SLV-SE810N/K only)

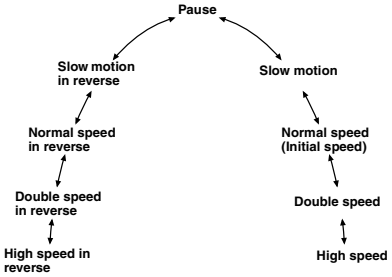
With the shuttle ring, you can operate a variety of playback options. There are two ways for using the shuttle ring, normal mode and jog mode.



continued

To use the shuttle ring in normal mode

During playback or pause, turn the shuttle ring clockwise or anticlockwise. Each change in the shuttle ring position changes the playback mode in the following way.



To use the shuttle ring in jog mode

Use this mode for frame-by-frame playback.

Press JOG to enter the jog mode. The JOG button lights up. If you change to the jog mode during any playback mode, playback pauses so you can see a still picture. Each change in the shuttle ring position shifts the picture one frame. To shift frames in reverse, turn the shuttle ring anticlockwise. The frame shift speed depends on the speed you turn the shuttle ring.

To resume normal mode, press JOG again. The JOG button turns off.

Tip

- Adjust the picture using the PROGRAM +/– buttons on the VCR if:
  – Streaks appear while playing in slow motion.
  – Bands appear at the top or bottom while pausing.
  – The picture shakes while pausing.
  To set tracking to the centre position, press both buttons (+/–) at the same time.

Notes

- The sound is muted during these operations.
- In the LP mode, noise may appear or there may be no colour.
- If the playback mode mark doesn't appear on the TV screen, press DISPLAY.

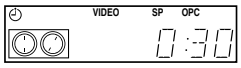
Setting the recording duration time

After you have started recording in the normal way, you can have the VCR stop recording automatically after a specified duration.

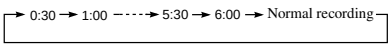
Before you start…

- Refer to "Index to parts and controls" for button locations.

1 While recording, press ● REC.
The ◴ indicator appears in the display window.



2 Press ● REC repeatedly to set the duration time.
Each press advances the time in increments of 30 minutes.



The tape counter decreases minute by minute to 0:00, then the VCR stops recording and turns off automatically.

To extend the duration

Press ● REC repeatedly to set a new duration time.

To cancel the duration

Press ● REC repeatedly until the ◴ indicator disappears and the VCR returns to the normal recording mode.

To stop recording

To stop the VCR while recording, press ■ STOP.

Note

- You cannot display the current tape time in the display window when setting the recording duration time.

Additional Operations

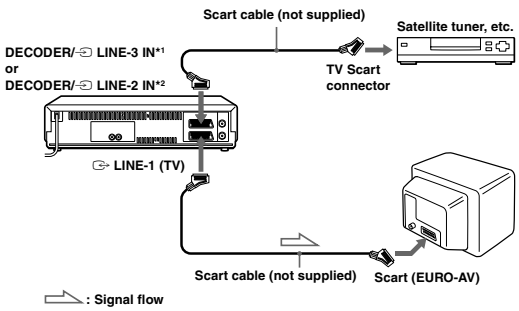
Synchronized Recording
(not available on SLV-SE610N/K)

You can set the VCR to automatically record programmes from equipment such as a satellite tuner by connecting the equipment to the DECODER/LINE-3 IN*1 (or DECODER/LINE-2 IN*2) connector. The connected equipment must have a timer function for this feature to work.

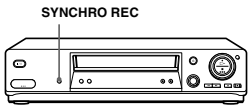
When the connected equipment turns on, the VCR also automatically turns on and starts recording a programme from DECODER/LINE-3 IN*1 (or DECODER/LINE-2 IN*2).

How to connect for Synchronized Recording

Connect the DECODER/LINE-3 IN*1 (or DECODER/LINE-2 IN*2) connector of the VCR to the TV Scart connector of the satellite tuner. Then connect the LINE-1 (TV) connector to the TV.



Recording programmes using the Synchronized Recording function



Before you start...

- Insert a tape with its safety tab in place. Make sure the tape is longer than the total recording time.
- Set DECODER/LINE3*1 (or DECODER/LINE2*2) to LINE3*1 (or LINE2*2) in the OPTIONS-2 menu (see page 85).
- Refer to "Index to parts and controls" for button locations.

1 Press INPUT SELECT or PROG +/– to display "L3*1 (or L2*2)" in the display window.

2 Set the timer on the connected equipment to the time of the programme you want to record, then turn it off.

3 Press SP/LP to select the tape speed.

4 Hold down SYNCHRO REC for more than two seconds.
The SYNCHRO indicator appears in the display window and the VCR stands by for recording.

The VCR automatically turns on and starts recording when it receives an input signal from the connected equipment.

The VCR automatically stops recording when the tape reaches the end or when the connected equipment stops transmitting an input signal.

To cancel the Synchronized Recording function

Press SYNCHRO REC. The SYNCHRO indicator disappears.

To stop recording

Press ■ STOP while recording.

Notes

- This function may not work with some types of satellite tuners.
- Some TVs or other equipment with timer functions will automatically turn off if no operation is performed within a certain amount of time. In this case, the Synchronized Recording also stops automatically.
- When the connected equipment turns on while the SYNCHRO indicator is appeared, recording starts automatically.
- If the settings for timer recording and Synchronized Recording overlap, the programme that starts first has priority and the second programme starts recording only after the first programme has finished.
- The Auto Clock Set function does not work while the VCR stands by for Synchronized Recording.

*1 SLV-SE810N/K only
*2 SLV-SE710N/K and SX710N/K only

Additional Operations

Checking/changing/cancelling timer settings

Before you start…

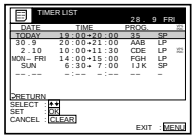
- Turn on your TV and set it to the video channel.
- Refer to "Index to parts and controls" for button locations.

1 Press I/⏻ to turn on the VCR.

2 Press MENU, then press ↑/↓ to highlight LISTS and press OK.

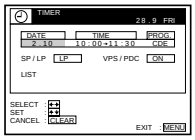
3 Press ↑/↓ to highlight TIMER LIST, then press OK:

- If you want to change or cancel a setting, go on to the next step.
- If you do not need to change or cancel the settings, press MENU, then turn off the VCR to return to recording standby.



4 Press ↑/↓ to select the setting you want to change or cancel, then press OK.

The selected setting appears in the TIMER menu.



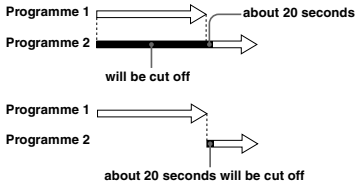
5 • To change the setting, press ←/→ to highlight the item you want to change, then press ↑/↓ to reset it.
• To cancel the setting, press CLEAR.

6 Press MENU to exit the menu.

If any settings remain, turn off the VCR to return to recording standby.

When the timer settings overlap

The programme that starts first has priority and the second programme starts recording only after the first programme has finished. If the programmes start at the same time, the programme listed first in the menu has priority.



Tip

- In step 6 above, you can check the TIMER LIST by selecting LIST and pressing OK. Press MENU to exit the TIMER LIST.

Recording stereo and bilingual programmes

In ZWEITON (German stereo) system

This VCR automatically receives and records stereo and bilingual programmes based on the ZWEITON system. When a stereo or bilingual programme is received, the STEREO indicator appears in the display window.

To select bilingual sound while recording

Press AUDIO MONITOR to select the sound you want.

To listen to	On-screen display	Display window
Main	MAIN	STEREO
Sub	SUB	STEREO
Main and sub	MAIN/SUB	STEREO

In NICAM system (SLV-SE610N, SE710N, SX710N, and SE810N only)

This VCR receives and records stereo and bilingual programmes based on the NICAM system (The NICAM indicator appears). When a stereo or bilingual programme is received, the STEREO indicator appears in the display window.

To record a NICAM programme, HIFI AUDIO in the OPTIONS-1 menu should be set to NICAM (initial setting). To check the menu setting, see page 85 for details.

To select the sound while recording

Press AUDIO MONITOR to select the sound you want.

Stereo programmes

To listen to	On-screen display	Display window
Stereo	STEREO	STEREO
Standard sound*	No indicator	No indicator

* Usually the mixed sound of left and right channels (monaural)

Bilingual programmes

To listen to	On-screen display	Display window
Main	MAIN	STEREO
Sub	SUB	STEREO
Main and sub	MAIN/SUB	STEREO
Standard sound*	No indicator	No indicator

* Usually the main sound (monaural)

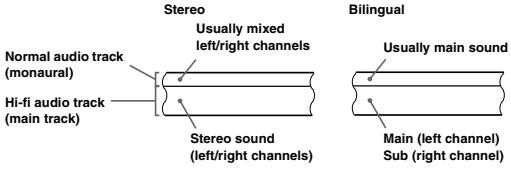
Selecting the sound during playback

Press AUDIO MONITOR to select the sound you want.

To listen to	On-screen display	Display window
Stereo/main and sub (left and right channels)	STEREO	STEREO
Left channel/main	LCH	STEREO
Right channel/sub	RCH	STEREO
Standard sound	No indicator	No indicator

How sound is recorded on a video tape

The VCR records sound onto two separate tracks. Hi-fi audio is recorded onto the main track along with the picture. Monaural sound is recorded onto the normal audio track along the edge of the tape.



continued

Notes

- To listen to playback sounds in stereo, you must use the Scart or AUDIO OUT connections.
- When you play a tape recorded in monaural, the sound is heard in monaural regardless of the AUDIO MONITOR setting.
- If the AUDIO MONITOR button does not function, check that AUDIO MIX*1 in the OPTIONS-1 menu is set to OFF (see page 84).
- If HIFI AUDIO*1 is set to STANDARD, the standard sound will be recorded on both the hi-fi and normal audio tracks. Pressing AUDIO MONITOR will not change the sound.

*1 SLV-SE610N, SE710N, SX710N, and SE810N only

Searching using the Smart Search function

If you record multiple programmes on a tape, you can use the Smart Search function to see what has been recorded on your tape. You can see information such as date, time, and programme position of the programmes recorded. You can also start playback directly from the selected programme using the SMART SEARCH screen.

All programmes are listed on the screen, regardless of how the programme was recorded.

To store programme information, see "Storing the programme information" on page 75. If you eject the tape before storing the information, the information will be cleared.

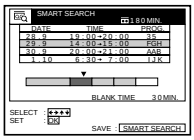
Before you start…

- Turn on your TV and set it to the video channel.
- Refer to "Index to parts and controls" for button locations.

1 After recording, press I/⏻ to turn on the VCR.

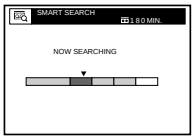
2 Press SMART SEARCH.

3 Press ↑/↓/←/→ to select the programme you want to start viewing.



4 Press OK.

The VCR starts searching, and playback starts automatically from the beginning of the selected programme.



To stop searching

Press ■ STOP.

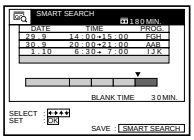
To exit the SMART SEARCH screen

Press MENU.

continued

To record in a blank space

Blank space on the tape will appear as a blank row in the SMART SEARCH screen. Select the last blank row in step 3, then press OK. The VCR rewinds/fast-forwards the tape to the beginning of the blank space, then stops. Start recording. Note that "BLANK TIME" and the remaining time indication only refers to the length of the last blank space.



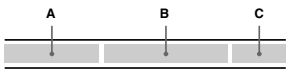
Tips

- You can store information for up to 24 programmes on a single list.
- While recording, you can display the SMART SEARCH screen using the SMART SEARCH button. If you decide to stop recording, press MENU to make the SMART SEARCH screen disappear first. Then press ■ STOP.
- You can have the player recall the data of the last cassette used to record programmes even after you eject the tape (page 78).

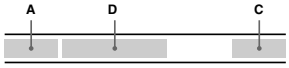
Notes

- You cannot use this function unless the clock is set.
- Depending on the tape, the total or remaining time may not appear correctly.
- If many short programmes are recorded on a tape, multiple programmes may be included in a single block. In this case, only the latest programme information will appear in the SMART SEARCH screen.
- Blank time is measured from the end of the last recorded programme to the end of the tape. However, if you eject the tape and then make a new recording on the same tape, the original recorded programme(s) is displayed as a blank space.
- The station name* may not appear if the VCR does not receive station name information signals.
- If you start recording a programme "D" from the middle of a previously recorded programme "A" and into another previously recorded programme "B," the Smart Search information for the second programme "B," which is recorded over, is deleted.

Originally recorded programmes



Recording the programme "D" over the programme "A" and "B"



* not available on SLV-SE610N/K

Storing, searching and deleting programme information (Smart Search Plus)

You can store programme information, such as the recording date and time, and programme position, for a maximum of four tapes. You can select a programme and start playback, by recalling the information directly from the Smart Search Plus screen.

Storing the programme information

You can store programme information for a maximum of four tapes. Before recording a programme, select a memory bank number from the list on the SMART SEARCH screen.

The unit will not memorize the memory bank number for each cassette. Note the number you assigned to each cassette.

Before you start...

- Turn on your TV and set it to the video channel.
- Refer to "Index to parts and controls" for button locations.

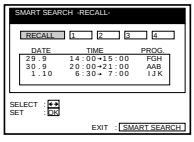
1 Insert a cassette for recording.

The VCR automatically turns on.

2 Press SMART SEARCH.

The SMART SEARCH -RECALL-screen appears.

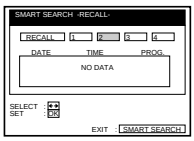
RECALL is highlighted and the data for the last cassette used to record programmes appears.



3 Press ←/→ to select a memory bank number.

Note the memory bank number on the cassette.

To cancel the process, press SMART SEARCH.



4 Press OK.

5 Start recording.

The information about the recorded programme will be stored on the selected memory number.

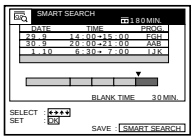
continued

To assign a memory number after recording

After recording a programme, you can store the programme information as a new memory before ejecting the cassette. However, you cannot add the memory on the existed memory bank number. To store the memory as additional, select the memory bank number before.

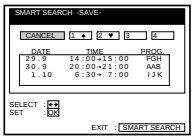
1 Press I/⏻ to turn on the VCR.

2 Press SMART SEARCH.



3 Press SMART SEARCH again.

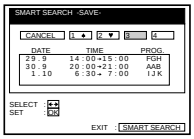
The SMART SEARCH -SAVE- screen appears.



4 Press ⬅/➡ to select a memory bank number.

Select the memory bank number with no information or the memory bank number to be deleted.

To cancel the process, select CANCEL.



5 Press OK.

To exit the SMART SEARCH screen

Press SMART SEARCH.

Note

- If you select a number that is already contains programmes, the old programme information is cleared and the new programme information is stored.

Searching for programme information stored on the memory bank number

You can start playback of the recorded programme after call the programme information from the four memory bank numbers.

Before you start...

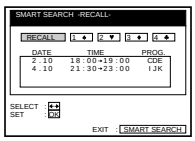
- Turn on your TV and set it to the video channel.

1 Insert the cassette for which you want to use the memory bank number.

The VCR automatically turns on.

2 Press SMART SEARCH.

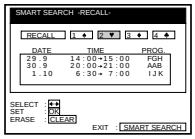
The SMART SEARCH -RECALL- screen appears.



3 Press ⬅/➡ to select the memory bank number for the inserted cassette.

The programme information contained in the selected memory bank number appears.

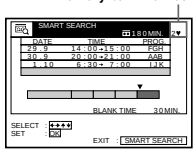
When you selected wrong memory bank number, eject the cassette and repeat steps from step 1.



4 Press OK.

The selected memory bank number appears on the SMART SEARCH screen.

Memory bank number



5 Press ⬆/⬇/⬅/➡ to select the programme you want to start viewing.

6 Press OK.

The VCR starts searching, and playback starts automatically from the beginning of the selected programme.

To stop searching

Press ■ STOP.

continued

To exit the SMART SEARCH screen

Press SMART SEARCH.

Recalling the most recent programme information

Programme information that is not saved in one of the memory bank numbers is erased when the cassette is ejected. The RECALL memory bank will temporarily memorize the programme information of the last tape used for recording in case that it is accidentally ejected.

If you re-insert the cassette in step 1 that you accidentally ejected and then select RECALL in step 3, the data for the last tape used to record programmes appears. Press OK and the latest information will appear on the SMART SEARCH screen. You can then add new information to this programme list. For an explanation about viewing programme information without using one of the memory banks, see page 73.

If you want to erase the latest information in the RECALL memory bank, press the SMART SEARCH button instead of the OK button in step 3 and then close the SMART SEARCH screen. The new information will replace all of the current information in the RECALL memory bank.

Note

- When you insert the cassette whose information does not exist on the memory bank number, you cannot search the recorded programme.

Deleting the programme information

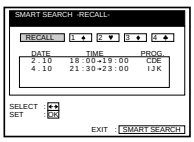
You can delete the programme information stored in a memory number.

Before you start...

- Turn on your TV and the VCR.
- Set the TV to the video channel.

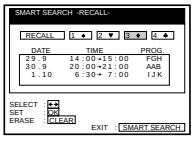
1 Press SMART SEARCH.

The SMART SEARCH -RECALL- screen appears.



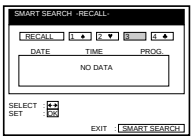
2 Press ⬅/➡ to select the memory bank number to delete.

The programme information on the selected memory bank number appears. Check the information that you want to delete.



3 Press CLEAR.

The programme information is deleted.



4 Press SMART SEARCH.

The SMART SEARCH screen disappears.

Note

- You cannot use or return the deleted information.

About the Demonstration Mode

The Smart Search Plus function has a Demonstration Mode that allows the user, such as a salesperson, to automatically display the Smart Search Plus screens.

To activate the Demonstration Mode

While the VCR is turned on, press and hold the both ■ (stop) and ⏏ (eject) buttons on the VCR for a few seconds. The demonstration will start and the four kinds of Smart Search Plus screens will be displayed repeatedly. If you operate the VCR, the Demonstration Mode temporarily stops. After about five minutes, the demonstration will restart.

To cancel the Demonstration Mode

While the VCR is turned off, press and hold the both ■ (stop) and ⏏ (eject) buttons on the VCR for a few seconds. You can also cancel the Demonstration Mode if you turn the power off and unplug the mains lead.

Searching using the index function

The VCR automatically marks the tape with an index signal at the point where each recording begins. Use these signals as references to find a specific recording.

1 Insert an indexed tape into the VCR.

2 Press ⏮/⏭ INDEX SEARCH.

- To search ahead, press ⏭ INDEX SEARCH.
- To search backwards, press ⏮ INDEX SEARCH.

The VCR starts searching, and playback starts automatically from that point.

To stop searching

Press ■ STOP.

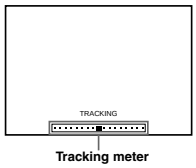
Notes

- No index signal will be added when recording starts from recording pause. However, an index signal will be marked if you change the programme position during recording pause.
- When you press ⏮ INDEX SEARCH, if there is nothing recorded before the selected index signal, playback may not start exactly at the index signal.

Adjusting the picture

Adjusting the tracking

Although the VCR automatically adjusts the tracking when playing a tape (the M indicator flashes in the display window, then turns off), distortion may occur if the recording is in poor condition. In this case, manually adjust the tracking.



Tracking meter

During playback, press PROGRAM +/– on the VCR to display the tracking meter. The distortion should disappear as you press one of the two buttons (the M indicator lights up). To resume automatic tracking adjustments, eject the tape and re-insert it.

About the Reality Regenerator (RR) function

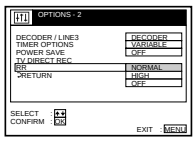
The Reality Regenerator function automatically restores the picture to its original quality during playback.

To use the Reality Regenerator function

1 Press MENU, then select OPTIONS and press OK.

2 Press ↑/↓ to highlight OPTIONS-2, then press OK.

3 Press ↑/↓ to highlight RR, then press OK.



4 Press ↑/↓ to set RR to NORMAL or HIGH, then press OK.

The RR indicator lights up in the display window.

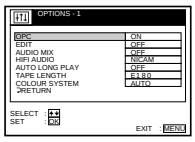
5 Press MENU to return to the original screen.

To turn it off, select OFF in step 4. The RR indicator turns off in the display window.

continued

About the Optimum Picture Control (OPC) function

The Optimum Picture Control (OPC) function automatically improves recording and playback quality by adjusting the VCR to the condition of the video heads and tape. To maintain better picture quality, we recommend that you set OPC to ON in the OPTIONS-1 menu (the OPC indicator lights up in the display window). For details, see page 84.



OPC playback

The OPC function automatically works on all types of tapes, including rental tapes and tapes that were not recorded with OPC.

OPC recording

Whenever you insert a tape and start recording for the first time, the VCR adjusts to the tape using the OPC function (the OPC indicator flashes rapidly). This adjustment is retained until the tape is ejected.

To deactivate the OPC function

Set OPC to OFF in the OPTIONS-1 menu. The OPC indicator in the display window turns off.

Tip

- To set tracking to the centre position, press the PROGRAM + and – buttons on the VCR at the same time.

Notes

- You can adjust the tracking for an NTSC-recorded tape but the tracking meter won't be displayed.
- With the Auto Long Play function on, the OPC function will work only in SP mode. If the tape speed automatically switches from SP to LP, the OPC function turns off. If, however, the entire programme is recorded in LP mode, the OPC function will work.
- There is a delay of about ten seconds before the VCR actually starts recording while the VCR analyses the tape. To avoid the delay, first set the VCR to recording pause (the OPC indicator flashes slowly) and press ● REC to have the VCR analyse the tape (the OPC indicator flashes rapidly) and return to recording pause. After the OPC indicator stops flashing, press ❚❚ PAUSE to start recording immediately.
  If you want to start recording quickly without using the OPC function, first set the VCR to recording pause (the OPC indicator flashes slowly) and press ❚❚ PAUSE again to start recording.

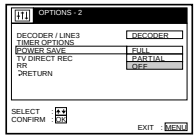
Reducing the VCR's power consumption

You can turn off the indicators in the display window when the VCR is off (standby mode) to reduce the VCR's power consumption.

1 Press MENU, then select OPTIONS and press OK.

2 Press ↑/↓ to highlight OPTIONS-2, then press OK.

3 Press ↑/↓ to select POWER SAVE, then press OK.



4 Press ↑/↓ to highlight the option, then press OK.

For SLV-SE710N/K, SX710N/K, and SE810N/K:

- FULL to reduce the power consumption to a minimum.
- PARTIAL to reduce the power consumption.

For SLV-SE610N/K:

- ON to reduce the power consumption to a minimum.

5 Press MENU to return to the original screen.

To turn on the indicators in the display window

Set POWER SAVE to OFF in step 4.

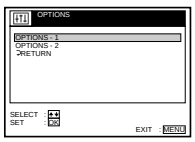
Notes

- When the VCR stands by for recording, the indicators in the display window remain lit even when POWER SAVE is set to FULL, PARTIAL, or ON.
- If POWER SAVE is set to FULL*, you cannot watch or record programmes from your Canal Plus decoder, satellite, or digital tuner during standby mode (page 86).

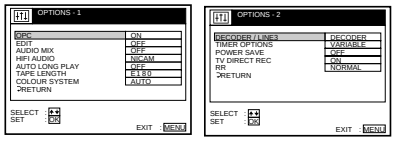
* not available on SLV-SE610N/K

Changing menu options

1 Press MENU, then select OPTIONS and press OK.



2 Press ↑/↓ to highlight OPTIONS-1 or OPTIONS-2, then press OK.



3 Press ↑/↓ to select the option, then press OK.

4 Press ↑/↓ to change the setting, then press OK.

5 Press MENU to return to the original screen.

Menu choices

Initial settings are indicated in bold print.

OPTIONS-1

Menu option	Set this option to
OPC	• **ON** to switch on the OPC (Optimum Picture Control) function and improve picture quality. • OFF to switch off OPC.
EDIT	• ON to minimize picture deterioration when editing. • **OFF** to turn off EDIT.
AUDIO MIX	• ON to listen to the hi-fi and normal audio tracks at the same time. The AUDIO MONITOR button will not function. • **OFF** to listen to the hi-fi and normal audio tracks separately. Select the sound using the AUDIO MONITOR button. • If you press ⏏ EJECT, AUDIO MIX will be reset to OFF. For details, see page 72.

Menu option	Set this option to
HIFI AUDIO*1	• **NICAM** to record NICAM broadcasts on the hi-fi audio track. • STANDARD to record standard sound on the hi-fi audio track. For details, see page 70.
AUTO LONG PLAY	• ON to change the timer recording tape speed automatically to the LP mode when the remaining tape length becomes shorter than the recording time. Note that for AUTO LONG PLAY to work correctly, the TAPE LENGTH setting must be accurate. • **OFF** to keep the set tape speed.
TAPE LENGTH	• **E180** to use an E-180 or shorter type tape. • E195 to use an E-195 type tape. • E240 to use an E-240 type tape. • E300 to use an E-300 type tape.
COLOUR SYSTEM	• **AUTO** to set the colour system automatically. • PAL to play back a tape recorded in the PAL colour system. • MESECAM to play back a tape recorded in the MESECAM colour system. If you press ⏏ EJECT or turn the VCR off, COLOUR SYSTEM will be reset to AUTO.

OPTIONS-2

Menu option	Set this option to
DECODER/ LINE2*2	• **DECODER** to use the DECODER/LINE-2 IN connector as the Canal Plus decoder connector. • LINE2 to use the DECODER/LINE-2 IN connector as the line input connector.
DECODER/ LINE3*3	• **DECODER** to use the DECODER/LINE-3 IN connector as the Canal Plus decoder connector. • LINE3 to use the DECODER/LINE-3 IN connector as the line input connector.
TIMER OPTIONS*4	• **VARIABLE** to display the TIMER METHOD menu for selecting STANDARD or SHOWVIEW when pressing the ◴ TIMER button. • STANDARD to display the TIMER menu when pressing the ◴ TIMER button. • SHOWVIEW to display the SHOWVIEW menu when pressing the ◴ TIMER button. For details, see page 55 and 59.

continued

Menu option	Set this option to
POWER SAVE*4	• FULL to turn off the indicators in the display window during standby mode to reduce the VCR's power consumption to a minimum. For using the Line Through function (page 18) or the decoder (page 39), select PARTIAL or OFF. • PARTIAL to turn off the indicators in the display window to conserve the VCR's power. • **OFF** to turn on the indicators in the display window while the VCR is standing by.
POWER SAVE*5	• ON to turn off the indicators in the display window during standby mode to reduce the VCR's power consumption to a minimum. • **OFF** to turn on the indicators in the display window while the VCR is standing by.
TV DIRECT REC*4	• **ON** to activate the TV Direct Rec function. • OFF to deactivate it.
RR	• **NORMAL** for normal everyday use. • HIGH for well-used video tapes such as rented tapes. Select this option when NORMAL does not improve the picture quality. • OFF to switch off the Reality Regenerator function.

Notes

- When the VCR stands by for recording, the indicators in the display window remain lit even when POWER SAVE is set to FULL, PARTIAL or ON.
- With the EDIT option ON, the OPC function does not work.

*1 SLV-SE610N, SE710N, SX710N, and SE810N only
*2 SLV-SE710N/K and SX710N/K only
*3 SLV-SE810N/K only
*4 not available on SLV-SE610N/K
*5 SLV-SE610N/K only

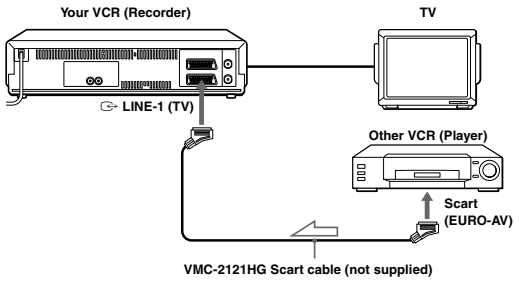
Editing

Connecting to a VCR or stereo system

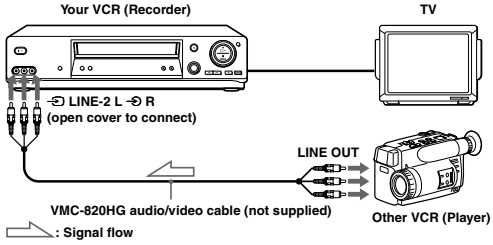
How to connect to record on this VCR

Connect the line outputs of the other VCR to the LINE IN connector or jacks of this VCR. Refer to the examples A through C and choose the connection that best suits your VCR.

Example A

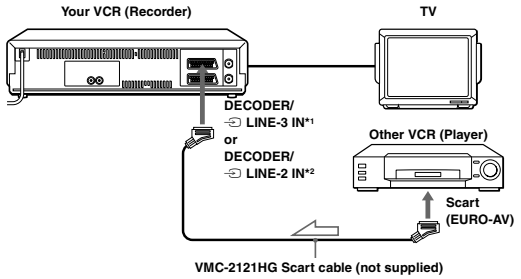


Example B



continued

Example C



: Signal flow

How to connect to a stereo system (SLV-SE810N/K only)

Connect the LINE-2 L R jacks on this VCR to the audio output jacks on the stereo system, using the RK-C510HG audio cable (not supplied).

Notes

- Make sure you connect the plugs to jacks of the same colour.*1
- If the other VCR is a monaural type, leave the red plugs unconnected.
- If you connect this VCR to both the LINE IN and LINE OUT jacks of the other VCR, select the input correctly to prevent a humming noise.
- If the other VCR does not have a Scart (EURO-AV) connector, use the VMC-2106HG cable instead and connect the cable to the line out jacks of the other VCR.
- When you connect another VCR to the DECODER/LINE-3 IN*1 (or DECODER/LINE-2 IN*2) connector, set DECODER/LINE3*1 (or DECODER/LINE2*2) to LINE3*1 (or LINE2*2) in the OPTIONS-2 menu.

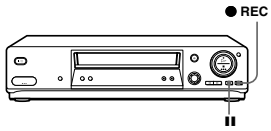
*1 SLV-SE810N/K only
*2 SLV-SE710N/K and SX710N/K only

Basic editing

(when recording on this VCR)

Before you start editing

- Turn on your TV and set it to the video channel.
- Press INPUT SELECT to display the connected line in the display window.
- Press SP/LP to select the tape speed, SP or LP.
- On this VCR, set EDIT to ON in the OPTIONS-1 menu. If the other VCR has a similar function, turn it on as well.



1 Insert a source tape with its safety tab removed into the other (playback) VCR. Search for the point to start playback and set it to playback pause.
2 Insert a tape with its safety tab in place into this (recording) VCR. Search for the point to start recording and press ❚❚ (pause).
3 Press ● REC on this VCR to set it to recording pause.
4 To start editing, press the ❚❚ (pause) buttons on both VCRs at the same time.

To stop editing

Press the ■ (stop) buttons on both VCRs.

Tip

- To cut out unwanted scenes while editing, press ❚❚ (pause) on this VCR when an unwanted scene begins. When it ends, press ❚❚ (pause) again to resume recording.

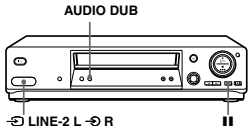
Note

- If you start editing following the procedure above, the VCR won't start recording with the OPC function. To record a tape with the OPC function, press ● REC again during recording pause in step 3 so the VCR analyses the tape. Then, press ❚❚ (pause) after the OPC indicator stops flashing to start recording. If you press ❚❚ (pause) before the OPC indicator stops flashing, the OPC function is cancelled.

Editing

Audio dubbing
(SLV-SE810N/K only)

This feature lets you record over the normal audio track. The monaural sound previously recorded is replaced while the original hi-fi sound remains unchanged. Use this feature to add commentary to a tape that you have recorded with a camcorder.



Before you start...

- Open the LINE-2 L R jacks cover on the front panel and connect a playback source.
- Turn on the TV and set it to the video channel.

1 Insert a source tape into your stereo system (or the playback VCR). Search for the point to start playback and set it to playback pause.
2 Insert a prerecorded tape with its safety tab in place into this (recording) VCR. Search for the start of the section to be replaced and press ❚❚ (pause).

The VCR enters pause mode.

3 Press AUDIO DUB.

The programme position changes to "L2," and the ⊖ indicator appears in the display window.

4 To start editing, press the ❚❚ (pause) buttons on this VCR and the stereo system (or other VCR) at the same time.

After you use this feature, the audio in playback mode is automatically set to monaural.

To stop editing

Press ■ (stop) on this VCR and the stereo system (or other VCR).

To listen to both the hi-fi and normal audio

Set AUDIO MIX to ON in the OPTIONS-1 menu (page 84). Use this feature to listen to dubbed audio over the original hi-fi audio. When AUDIO MIX is set to ON, the AUDIO MONITOR button does not function.

Remember to reset AUDIO MIX to OFF after playing the tape.

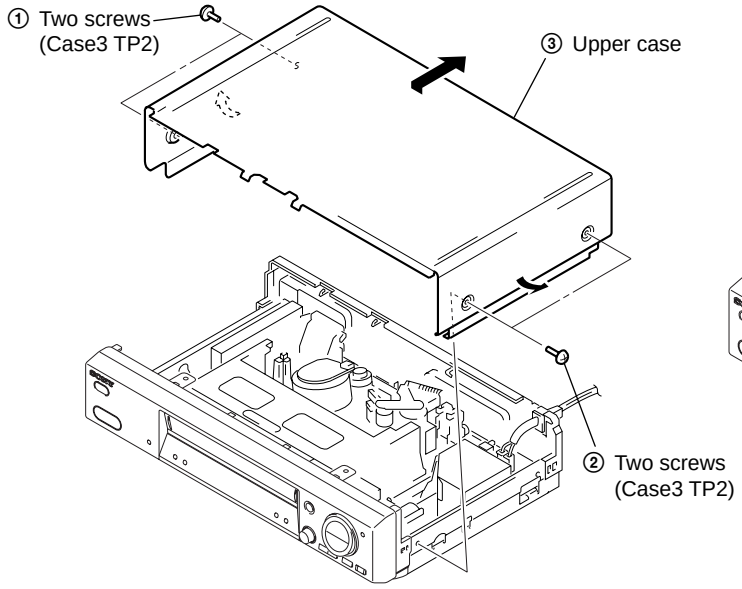
Note

- If you eject the tape or turn the VCR off, AUDIO MIX is automatically set to OFF.

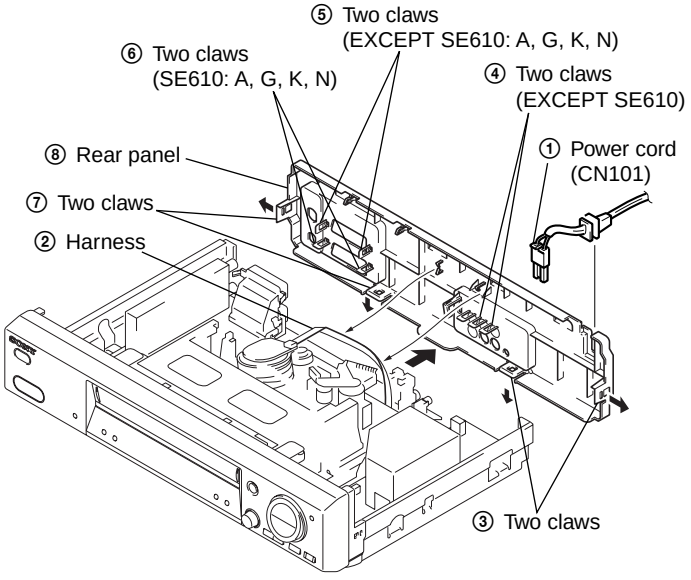
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

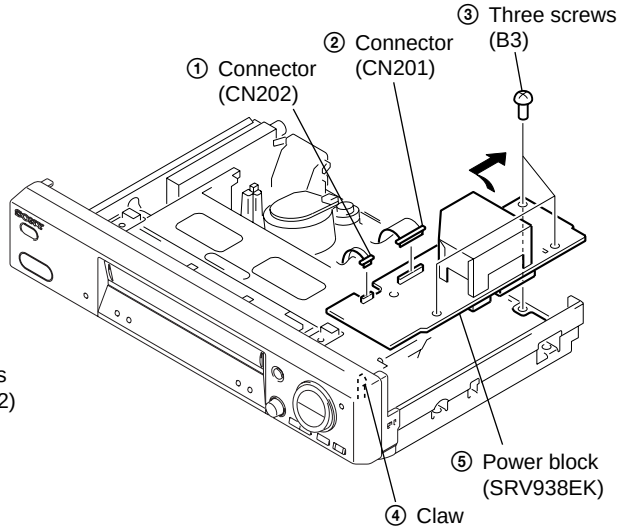
2-1. UPPER CASE REMOVAL



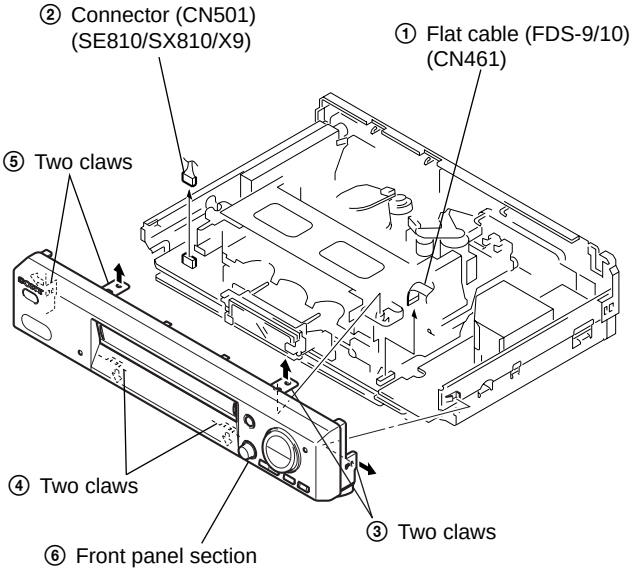
2-2. REAR PANEL REMOVAL



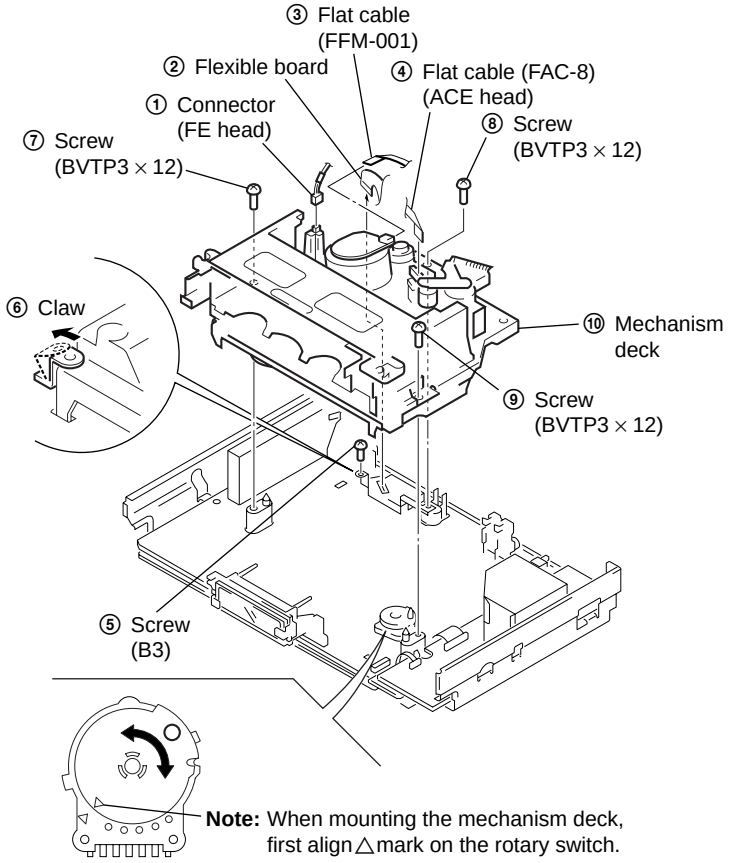
2-3. POWER BLOCK (SRV938EK) REMOVAL



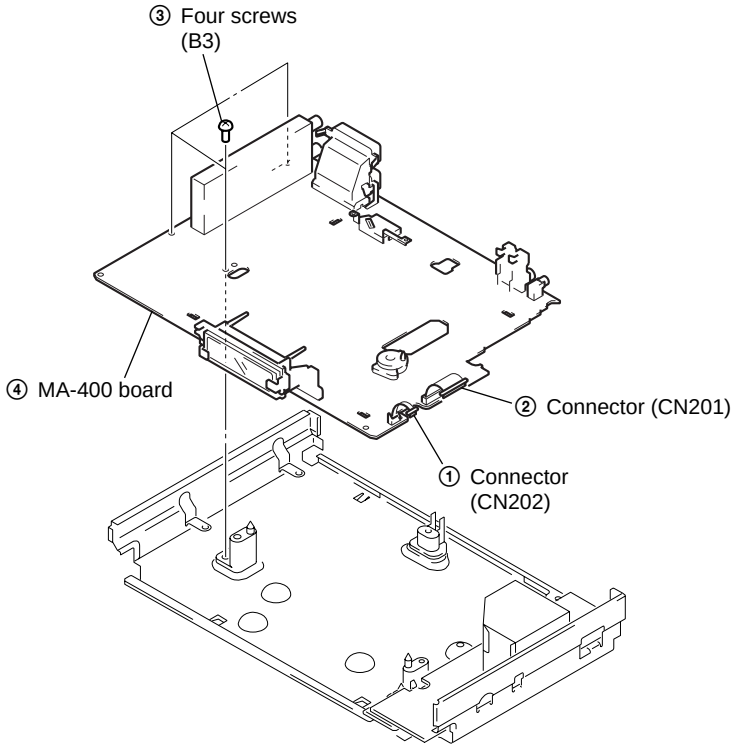
2-4. FRONT PANEL SECTION REMOVAL



2-5. MECHANISM DECK REMOVAL



2-6. MA-400 BOARD REMOVAL



2-7. INTERNAL VIEWS

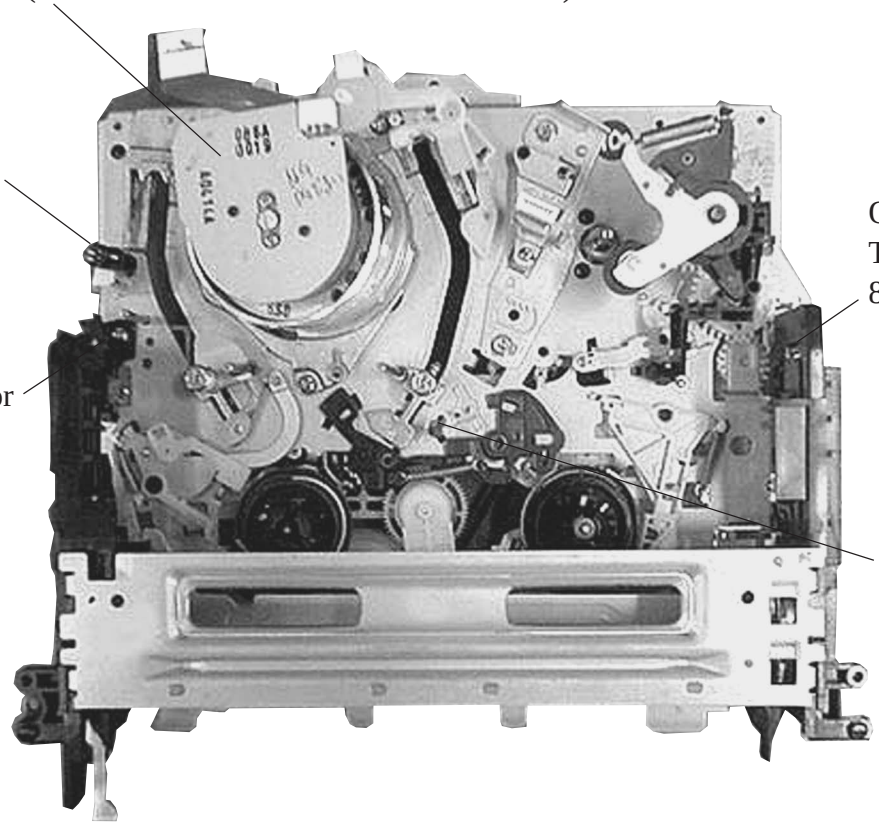
Drum assembly (M901) (DZH-0B5A-R)
1-772-364-11 (EXCEPT SE610B/SE710B/SE810B/SX710B/X9B)
Drum assembly (M901) (DZH-0B6A-R)
1-772-365-11 (SE610B/SE710B/SE810B/SX710B/X9B)

FE head
1-500-471-11

Q101
Tape end sensor
8-729-043-84

Q100
Tape top sensor
8-729-043-84

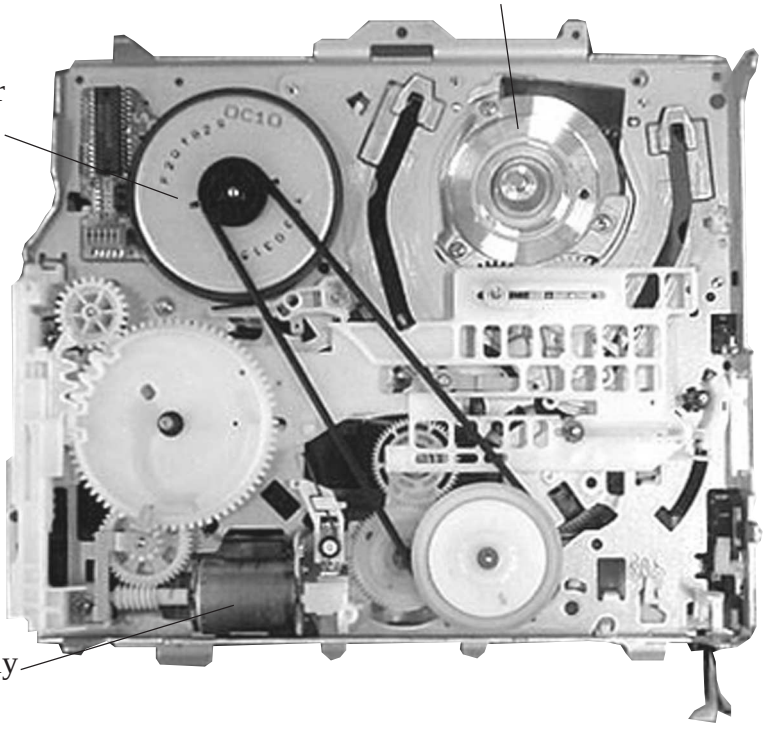
D100
Tape top/end LED
8-719-048-26



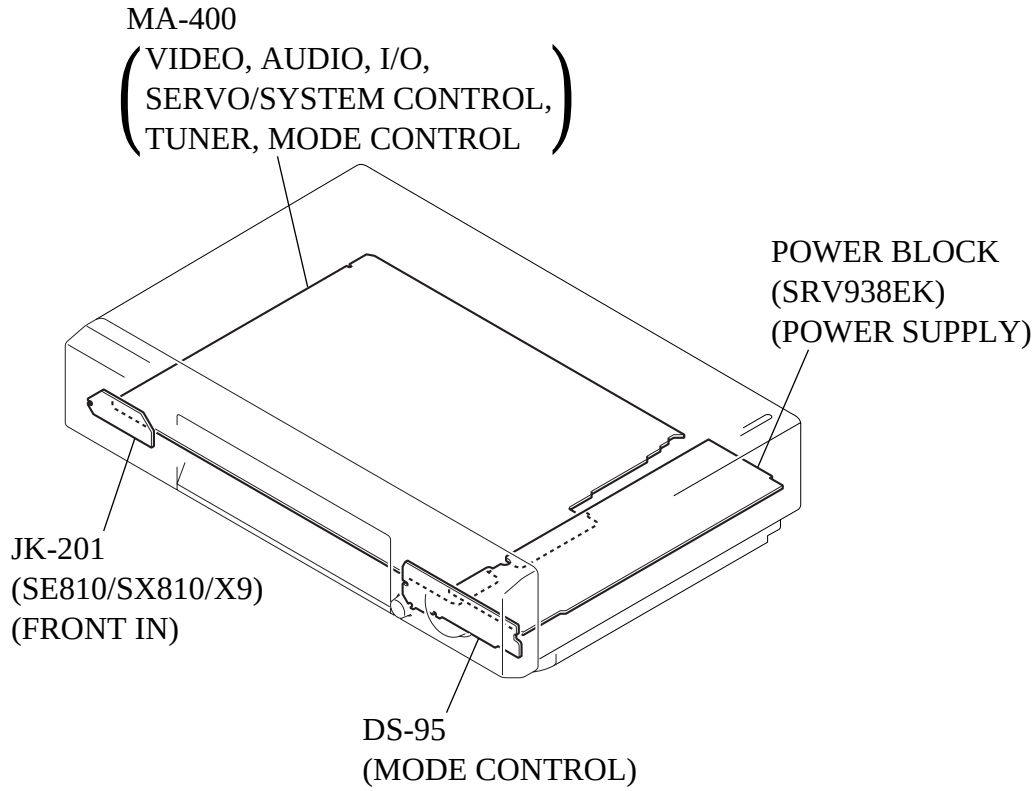
Drum assembly (M901) (DZH-0B5A-R)
1-772-364-11 (EXCEPT SE610B/SE710B/SE810B/SX710B/X9B)
Drum assembly (M901) (DZH-0B6A-R)
1-772-365-11 (SE610B/SE710B/SE810B/SX710B/X9B)

M902
Capstan motor
1-698-971-11

M903
Cam motor assembly
X-3947-577-1

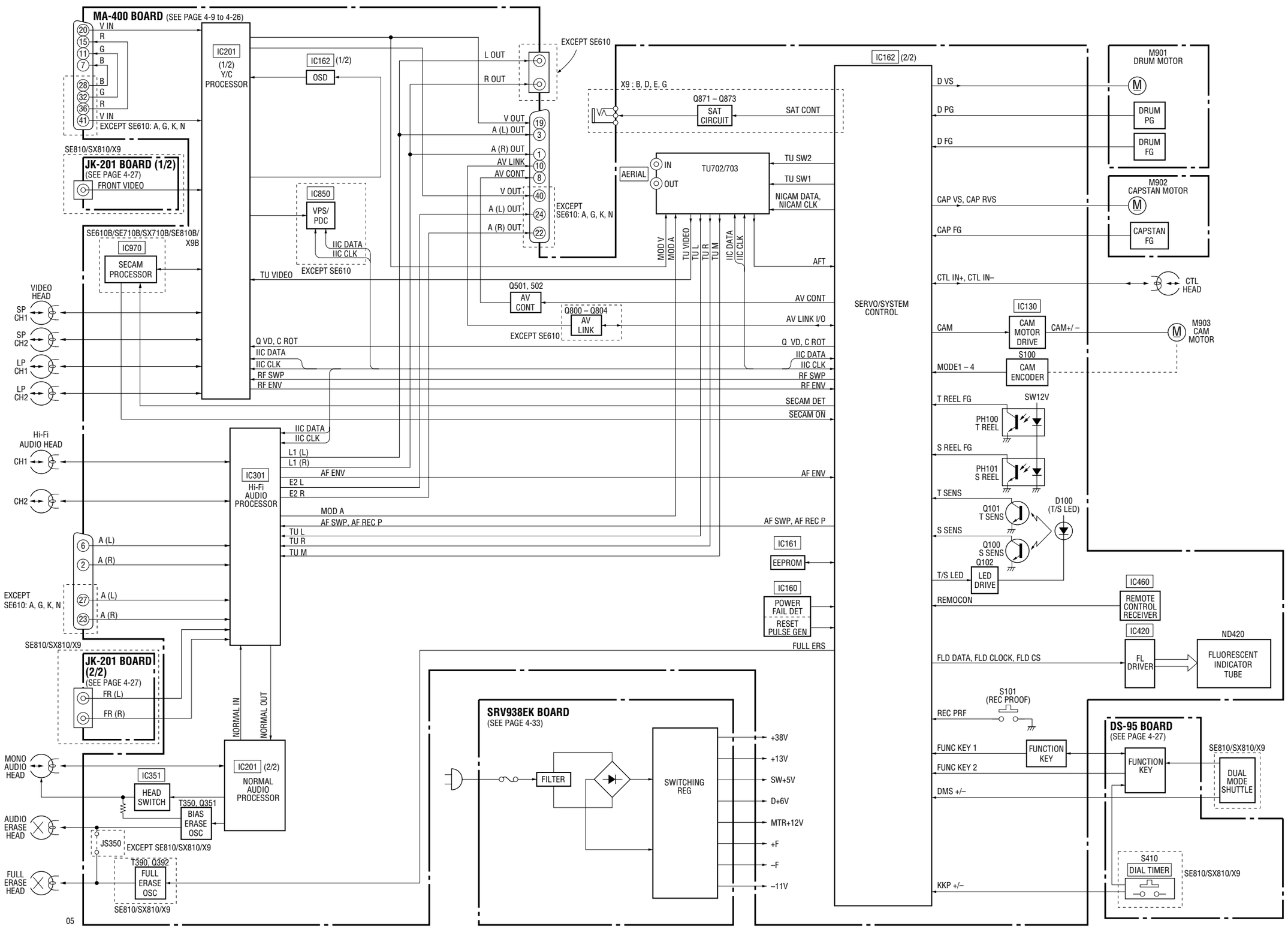


2-8. CIRCUIT BOARDS LOCATION

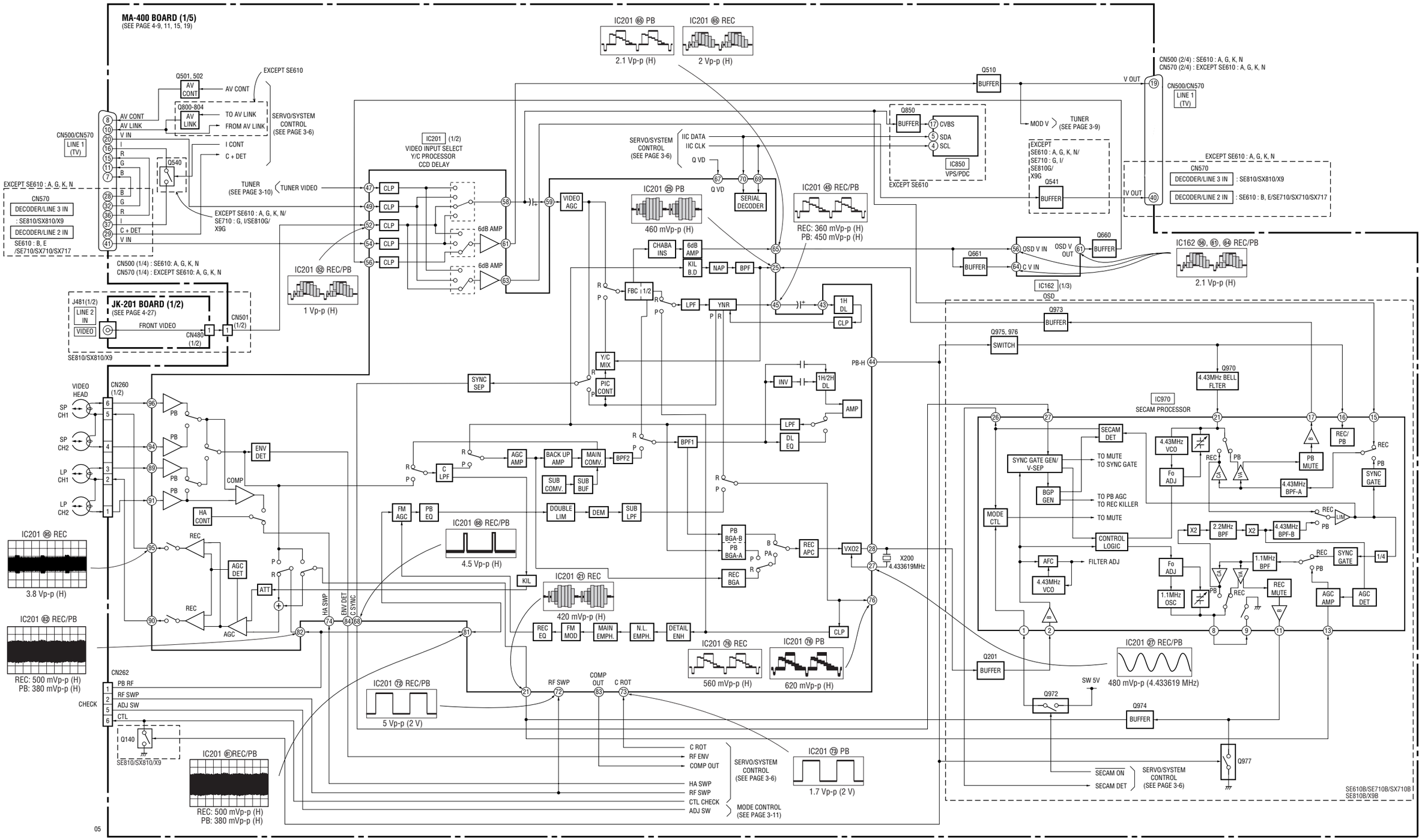


SECTION 3
BLOCK DIAGRAMS

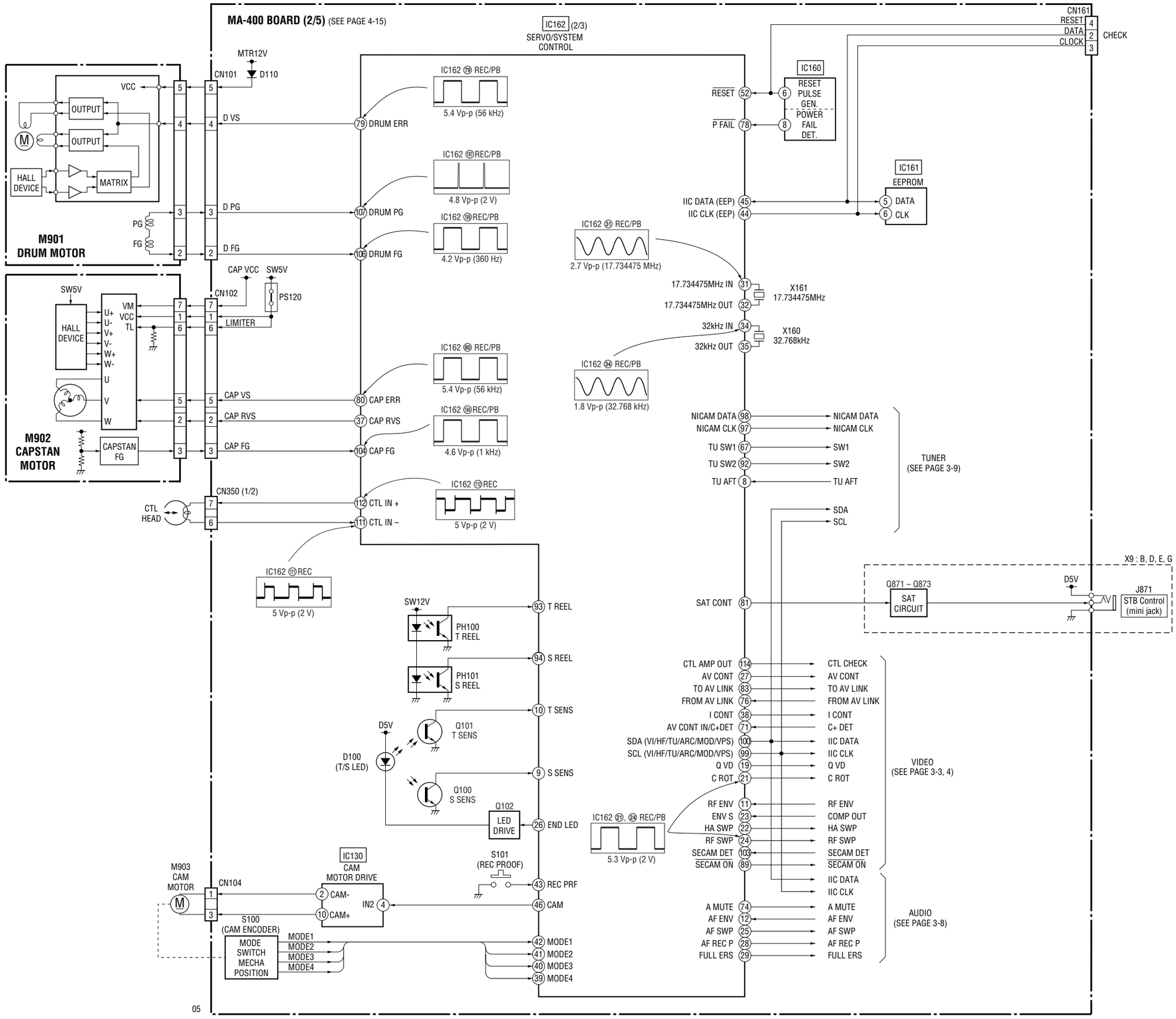
3-1. OVERALL BLOCK DIAGRAM



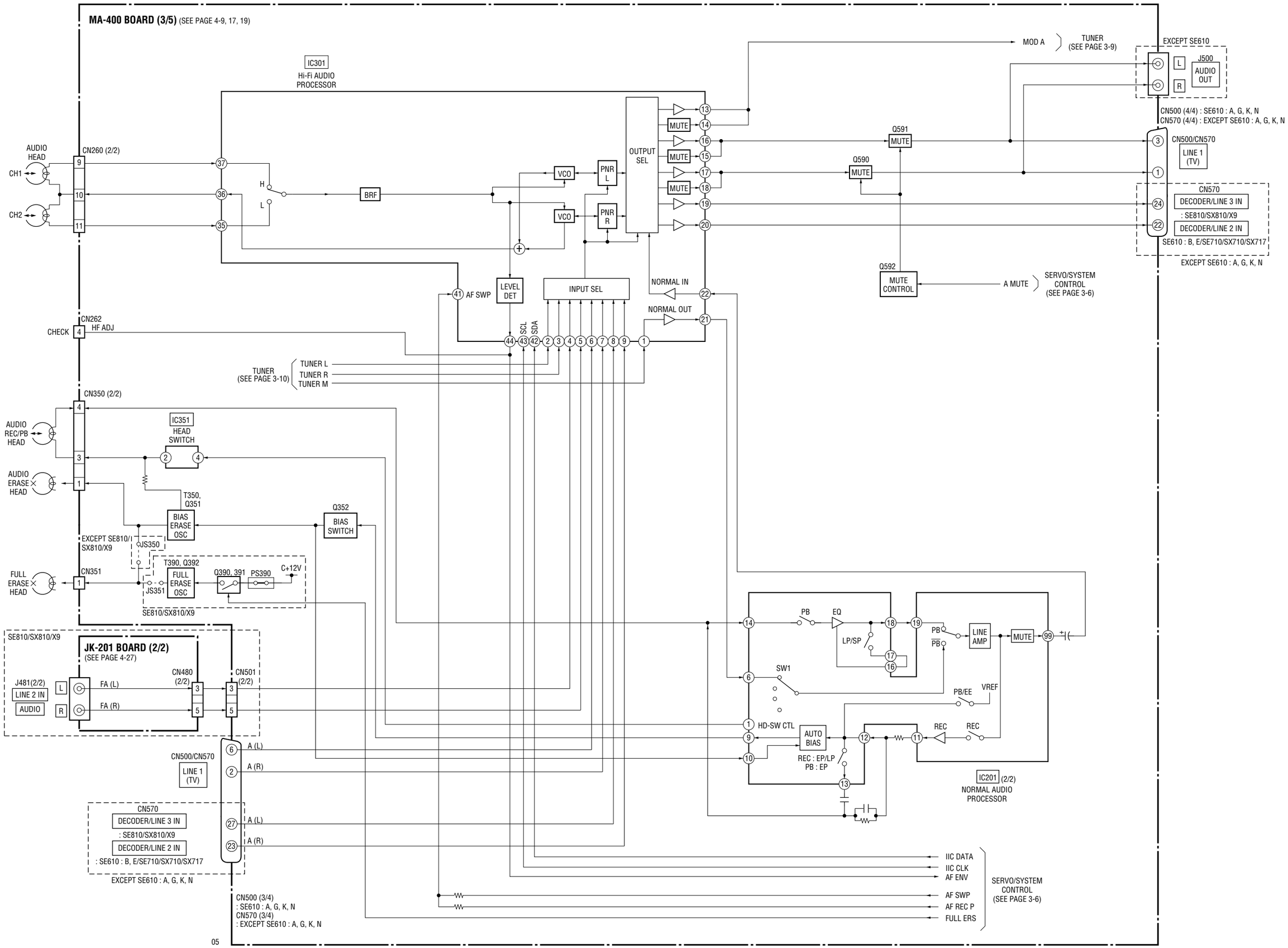
3-2. VIDEO BLOCK DIAGRAM



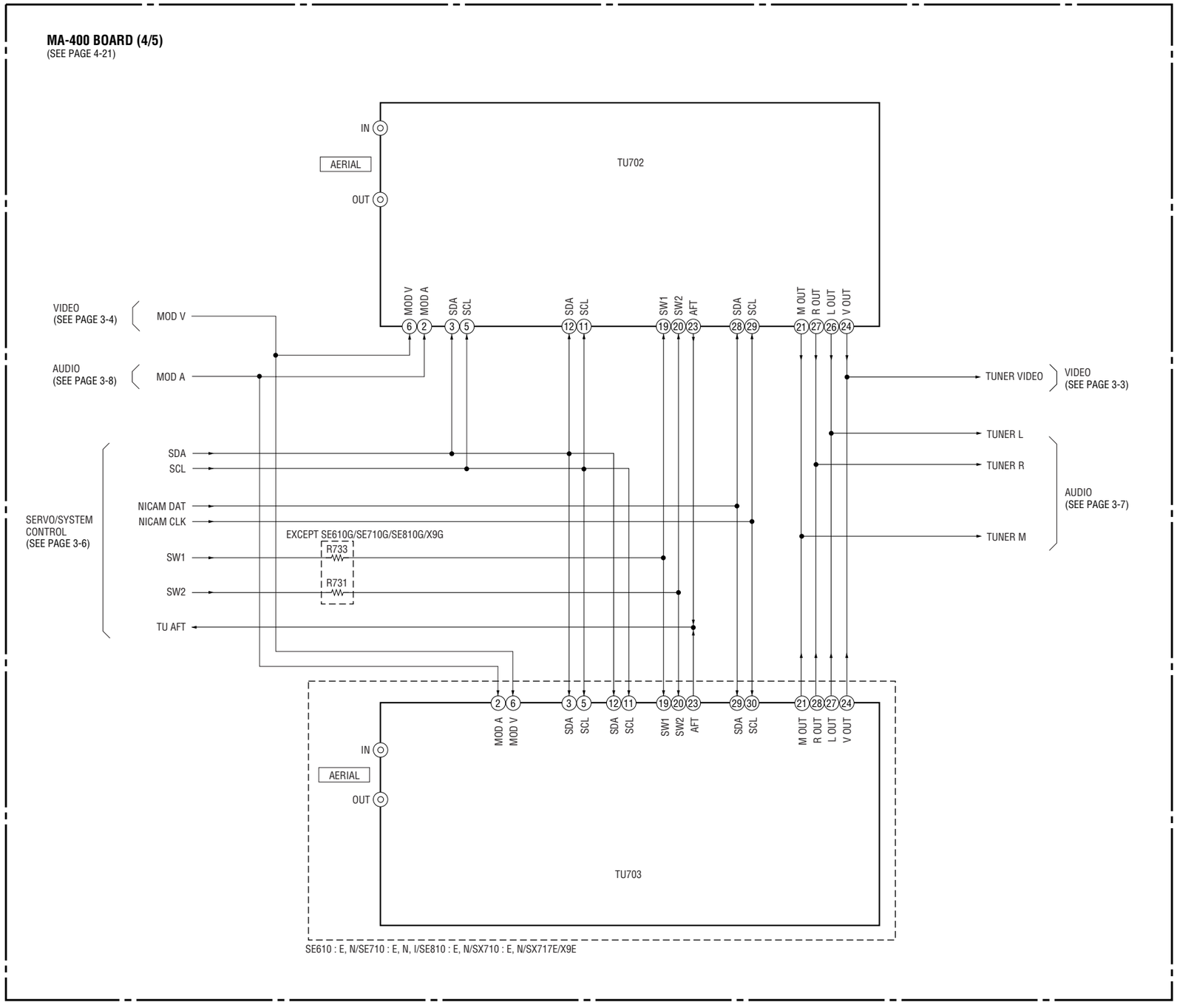
3-3. SERVO/SYSTEM CONTROL BLOCK DIAGRAM



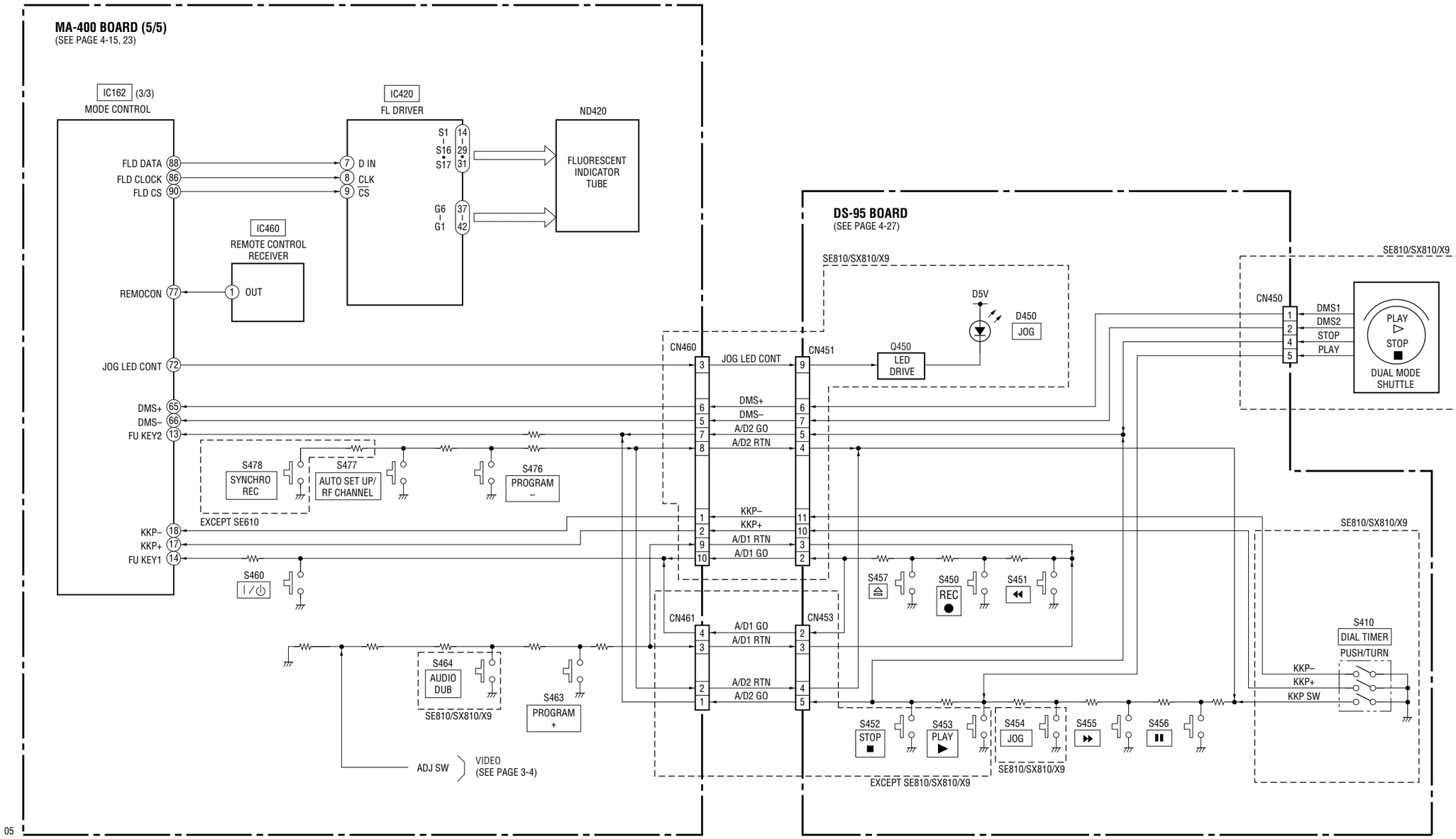
3-4. AUDIO BLOCK DIAGRAM



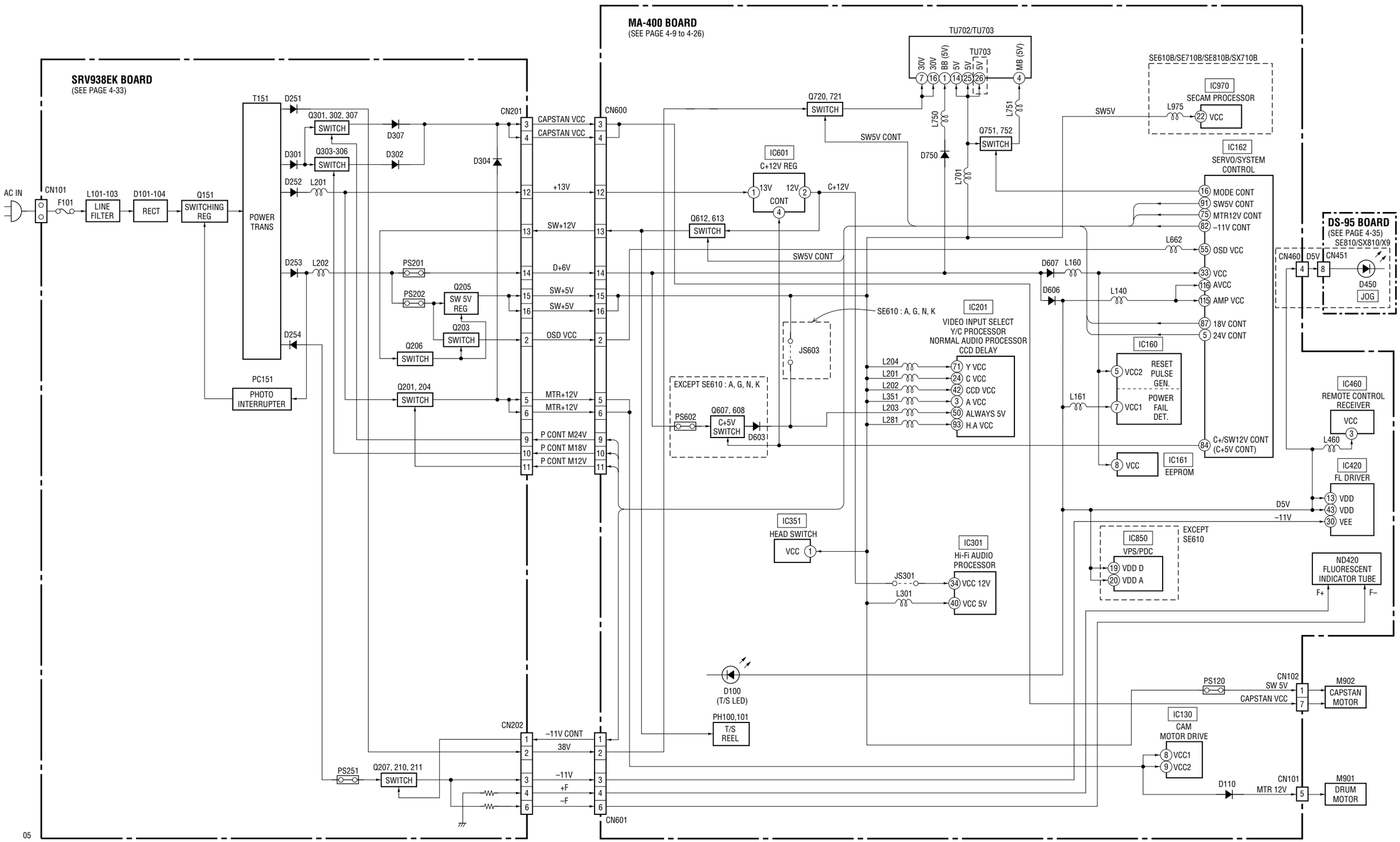
3-5. TUNER BLOCK DIAGRAM



3-6. MODE CONTROL BLOCK DIAGRAM



3-7. POWER BLOCK DIAGRAM



SECTION 4
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For printed wiring board:

- ○——— : indicates a lead wire mounted on the component side.
- ●——— : indicates a lead wire mounted on the printed side.
- ▒▒▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

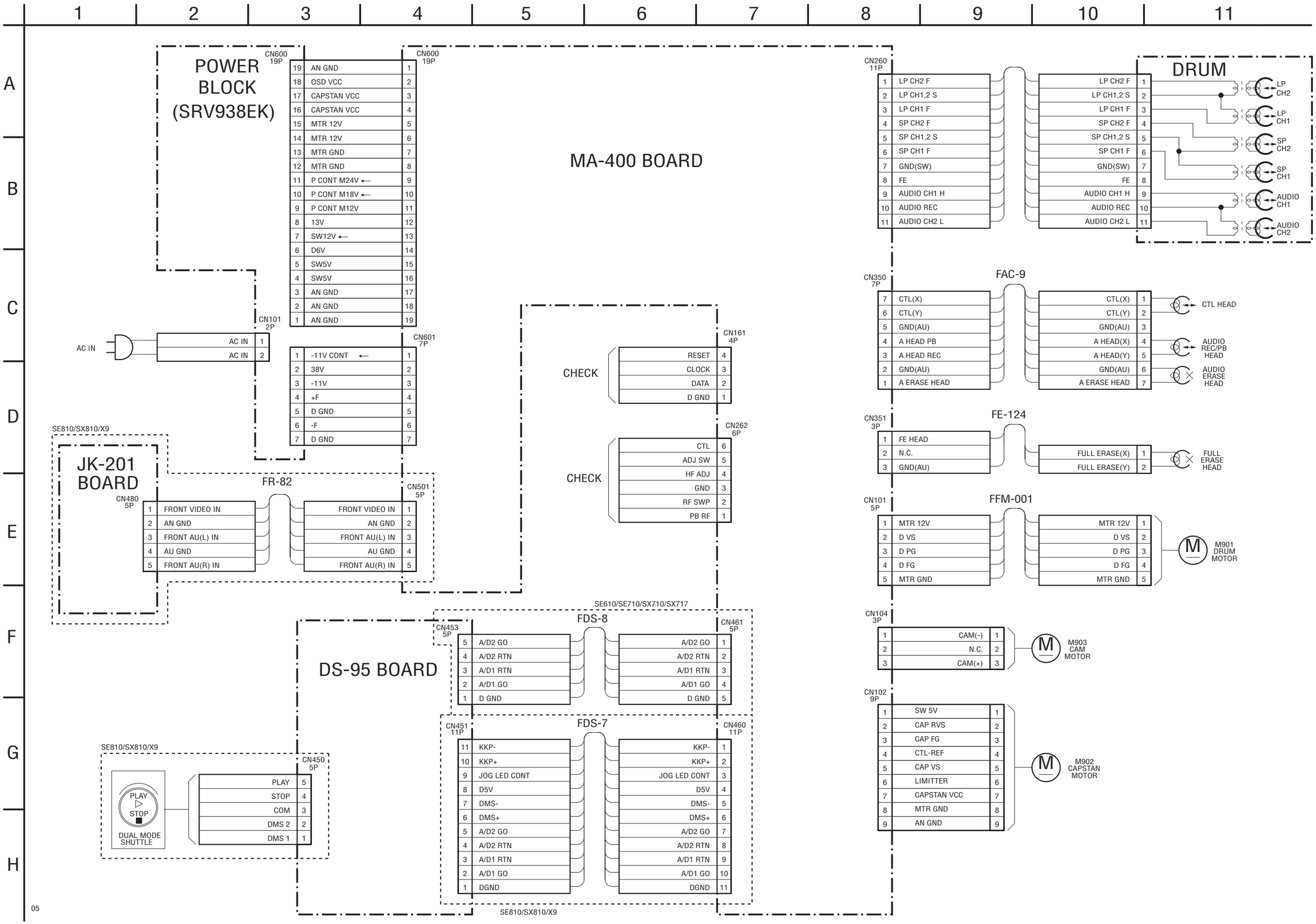
For schematic Diagram:

- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, 1/4 W (Chip resistors : 1/10 W) unless otherwise specified.
  kΩ : 1000 Ω, MW : 1000 kΩ.
- All capacitors are in µF unless otherwise noted. pF : µµF 50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.
- △ : internal component.
- : adjustment for repair.
- : B+ Line.
- : B– Line.
- Circled numbers refer to waveforms.
- Voltages are dc between measurement point.
- Readings are taken with a color-bar signal input.
- Readings are taken with a digital multimeter (DC 10 MW).
- Voltage variations may be noted due to normal production tolerances.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

4-1. FRAME SCHEMATIC DIAGRAM

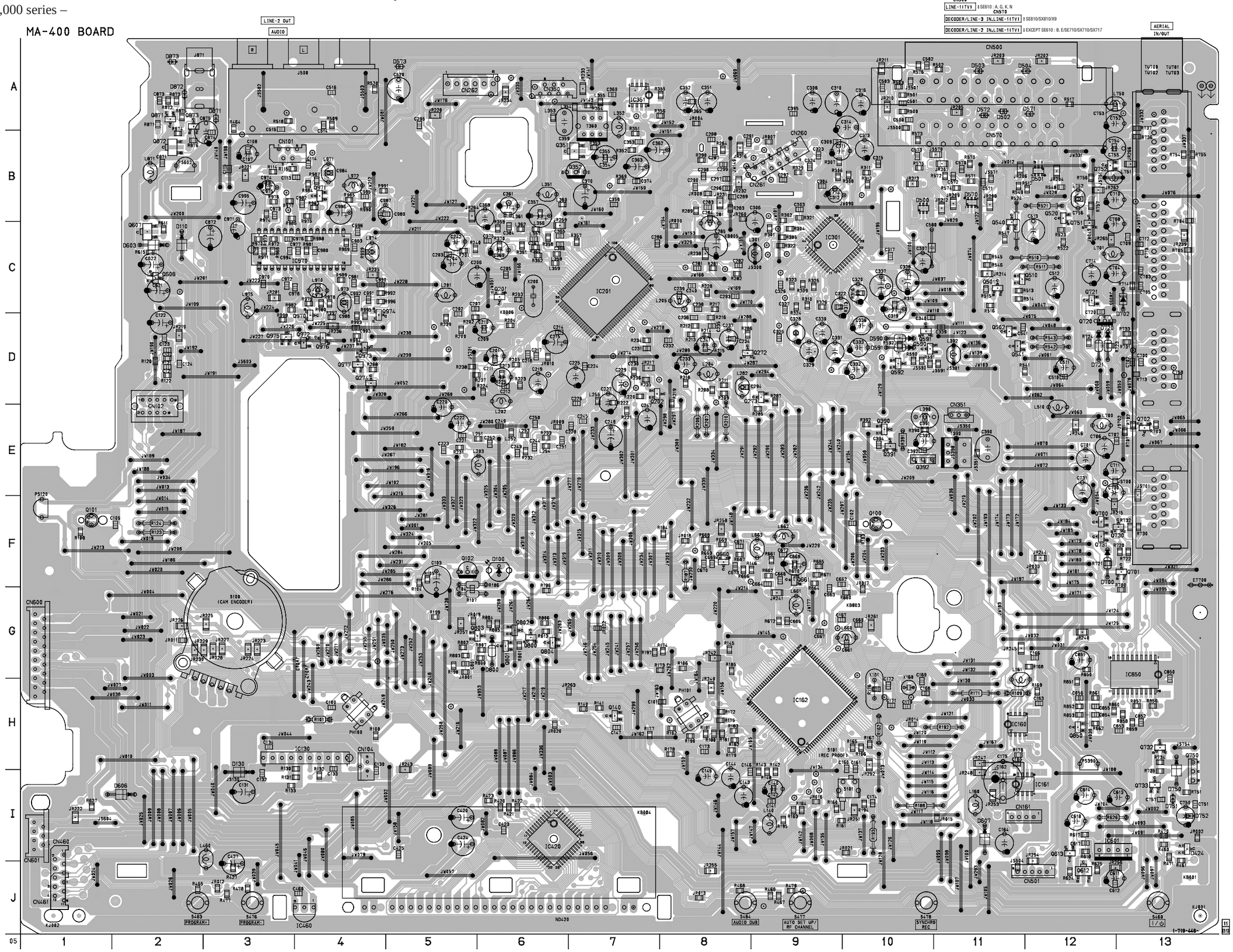


There are a few cases that the part isn't mounted in this model is printed on this diagram.

4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

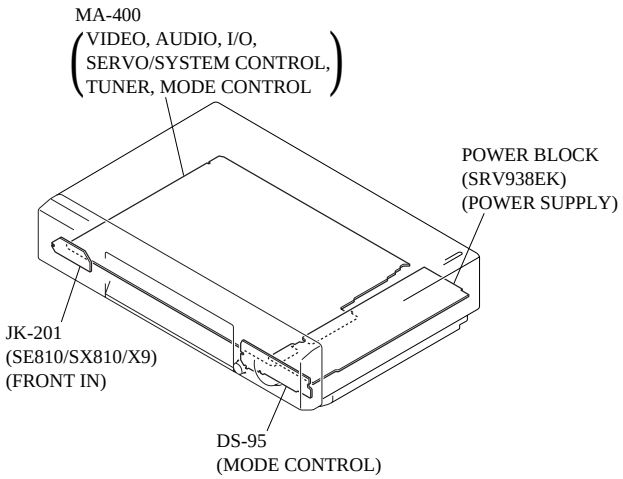
MA-400 (VIDEO, AUDIO, I/O, SERVO/SYSTEM CONTROL, TUNER, MODE CONTROL) PRINTED WIRING BOARD

– Ref. No.: MA-400 board; 1,000 series –



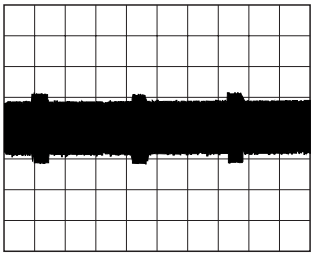
MA-400 BOARD

CN101	B-3	Q100	F-10
CN102	E-2	Q101	F-1
CN104	H-4	Q102	F-5
CN161	I-11	Q140	H-7
CN260	B-9	Q201	C-6
CN262	A-5	Q202	D-7
CN350	A-6	Q351	B-7
CN461	J-1	Q352	B-7
CN460	I-1	Q390	E-10
CN500	A-11	Q391	E-10
CN501	J-12	Q392	E-10
CN570	B-11	Q501	C-11
CN600	G-1	Q502	D-11
CN601	I-1	Q510	C-11
		Q540	C-11
D100	F-6	Q541	D-11
D110	C-2	Q590	D-10
D424	I-13	Q591	D-10
D500	B-10	Q592	D-10
D501	B-12	Q607	C-2
D502	A-11	Q608	C-2
D503	A-11	Q612	J-12
D504	A-12	Q613	I-12
D570	B-11	Q660	F-8
D571	A-12	Q661	F-9
D572	A-11	Q720	D-12
D573	A-5	Q721	C-12
D590	D-9	Q751	C-12
D603	C-2	Q752	B-12
D606	I-2	Q800	G-6
D607	I-11	Q801	G-6
D702	C-13	Q802	G-6
D720	D-12	Q803	G-6
D721	D-12	Q804	G-6
D750	I-13	Q850	H-12
D800	G-6	Q871	A-2
D871	A-3	Q872	B-2
D872	A-2	Q873	A-2
D873	A-2	Q970	D-4
		Q972	D-4
IC130	H-4	Q973	D-4
IC160	H-11	Q974	D-4
IC161	I-12	Q975	D-3
IC162	H-9	Q976	D-4
IC201	C-7	Q977	D-4
IC301	C-9		
IC351	A-7		
IC420	I-6		
IC460	J-4		
IC601	I-12		
IC850	G-13		
IC970	C-4		



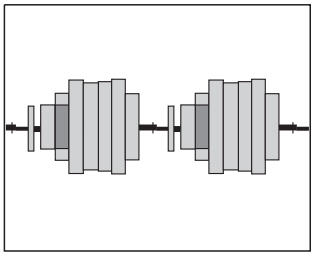
• Waveforms

❶ IC201 ㉟ REC



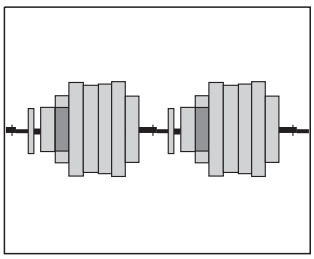
3.8 Vp-p (H)

❷ IC201 ㉑ REC



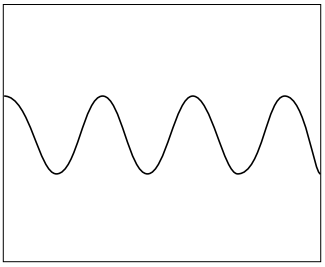
420 mVp-p (H)

❸ IC201 ㉕ PB



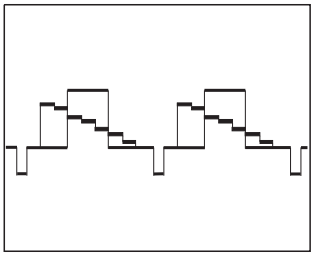
460 mVp-p (H)

❹ IC201 ㉗ REC/PB



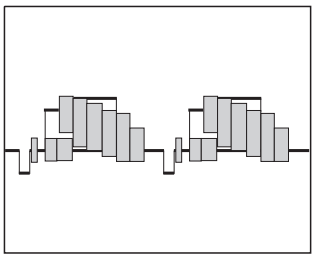
480 mVp-p (4.433619 MHz)

❺ IC201 ㊺ REC/PB



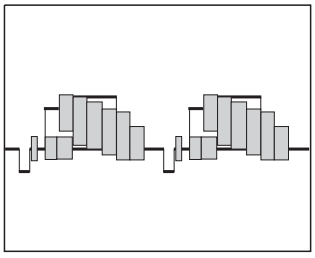
REC : 360 mVp-p (H)
PB : 450 mVp-p (H)

❻ IC201 ㊷ REC/PB



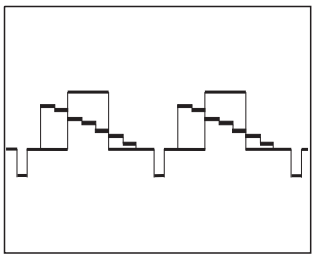
1 Vp-p (H)

❼ IC201 ㊺ REC



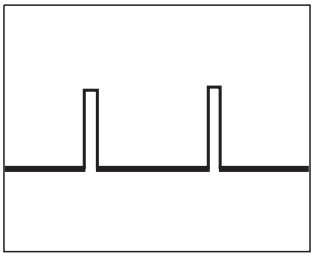
2 Vp-p (H)

❽ IC201 ㊺ PB



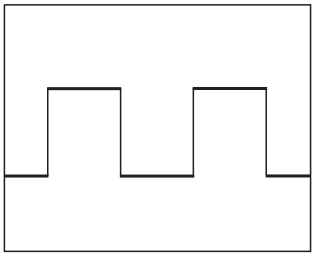
2.1 Vp-p (H)

❾ IC201 ㊽ REC/PB



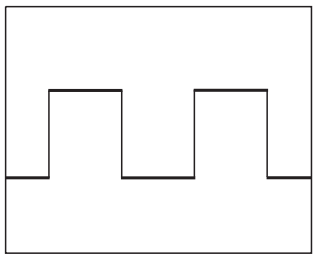
4.5 Vp-p (H)

❿ IC201 ㉜ REC/PB



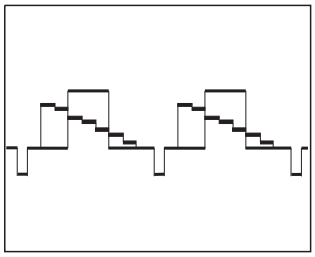
5 Vp-p (2 V)

⓫ IC201 ㉓ PB



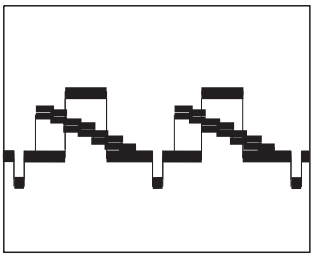
1.7 Vp-p (2 V)

⓬ IC201 ㊻ REC



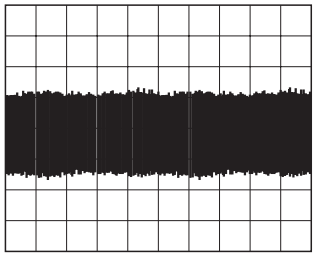
560 mVp-p (H)

⓭ IC201 ㊻ PB



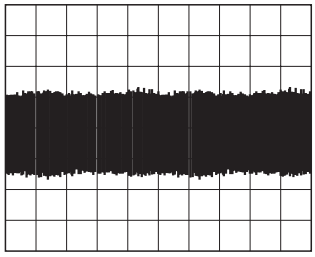
620 mVp-p (H)

⓮ IC201 ㊶ REC/PB



REC : 500 mVp-p (H)
PB : 380 mVp-p (H)

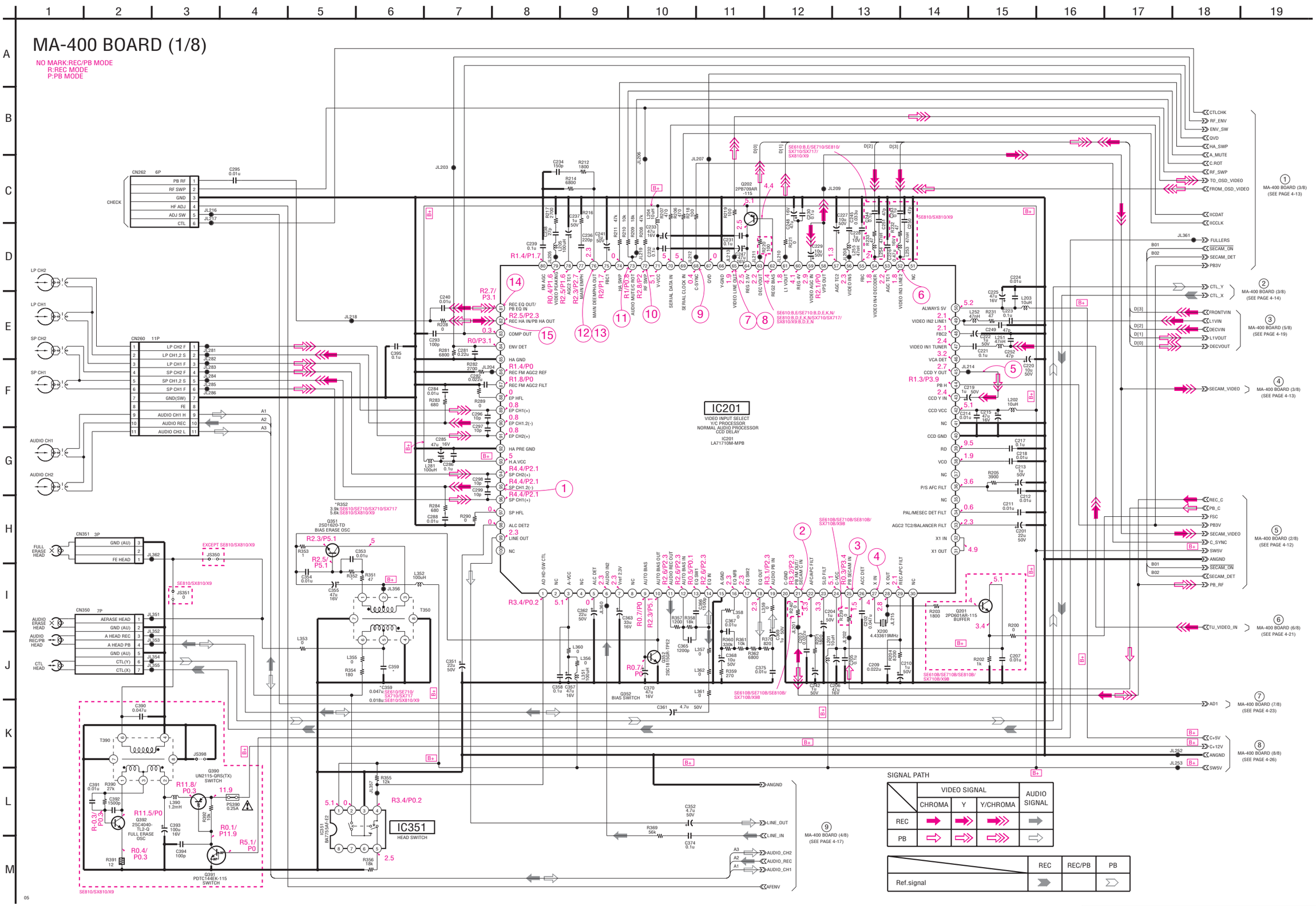
⓯ IC201 ㊷ REC/PB



REC : 500 mVp-p (H)
PB : 380 mVp-p (H)

MA-400 (VIDEO, AUDIO) SCHEMATIC DIAGRAM • See page 4-5 for printed wiring board.

– Ref. No.: MA-400 board; 1,000 series –



Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MA-400 (SECAM) SCHEMATIC DIAGRAM **• See page 4-5 for printed wiring board.**

– Ref. No.: MA-400 board; 1,000 series –

MA-400 BOARD (2/8)

NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE

SE610B/SE710B/SE810B/SX710B/X9B

IC970
SECAM PROCESSOR

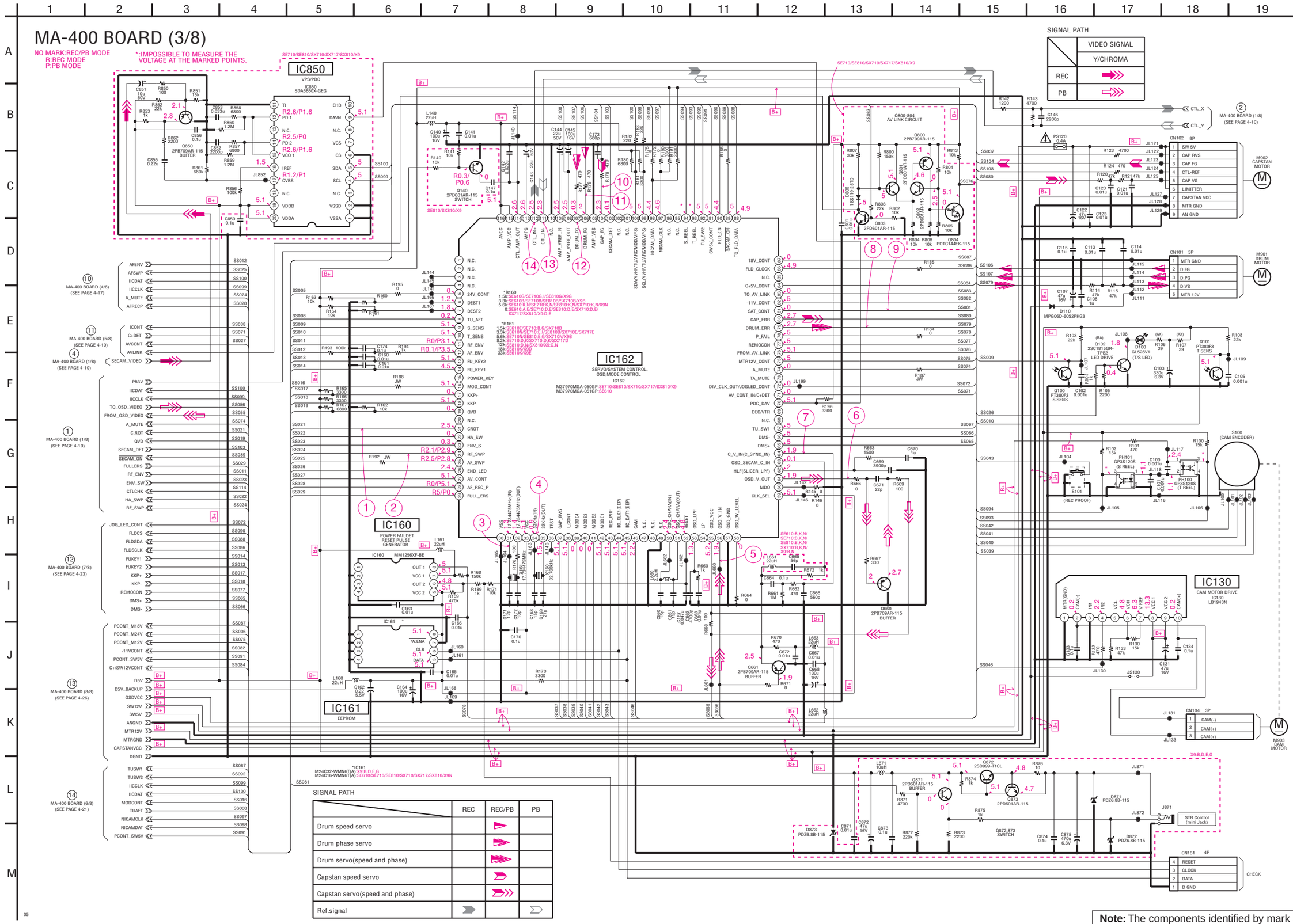
SIGNAL PATH

	VIDEO SIGNAL	
	CHROMA	Y/CHROMA
REC	➡	➡
PB	⇨	⇨

5
MA-400 BOARD (1/8)
(SEE PAGE 4-10)

MA-400 (SERVO/SYSTEM CONTROL) SCHEMATIC DIAGRAM • **See page 4-5 for printed wiring board and page 4-15 for waveforms.**

– Ref. No.: MA-400 board; 1,000 series –

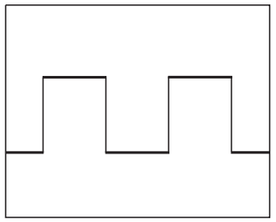


Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

SERVO/SYSTEM CONTROL
MA-400 (3/8)

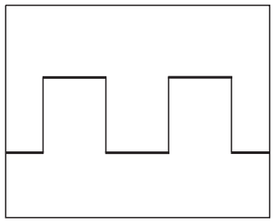
• Waveforms

❶ IC162 ㉑ REC/PB



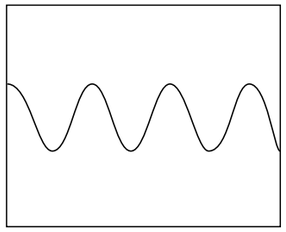
5.3 Vp-p (2 V)

❷ IC162 ㉔ REC/PB



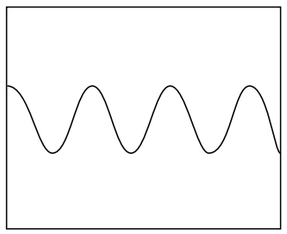
5.3 Vp-p (2 V)

❸ IC162 ㉛ REC/PB



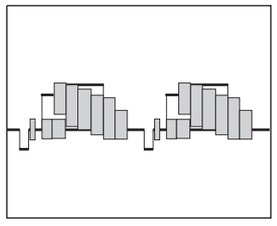
2.7 Vp-p (17.734475 MHz)

❹ IC162 ㉞ REC/PB



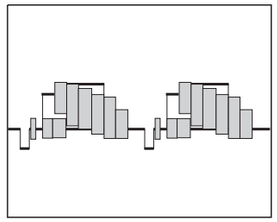
1.8 Vp-p (32.768 kHz)

❺ IC162 ㊺ REC/PB



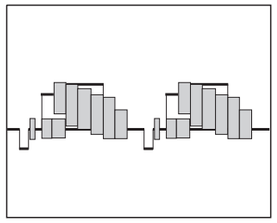
2.1 Vp-p (H)

❻ IC162 ㊶ REC/PB



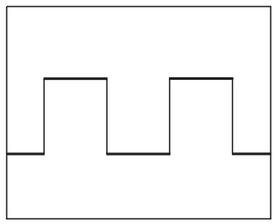
2.1 Vp-p (H)

❼ IC162 ㊹ REC/PB



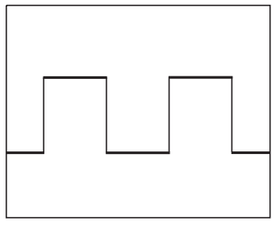
2.1 Vp-p (H)

❽ IC162 ㊾ REC/PB



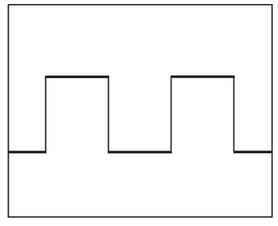
5.4 Vp-p (56 kHz)

❾ IC162 ㊿ REC/PB



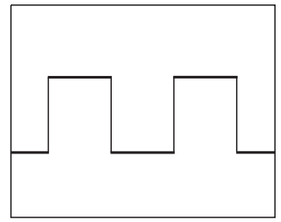
5.4 Vp-p (56 kHz)

❿ IC162 ㊹ REC/PB



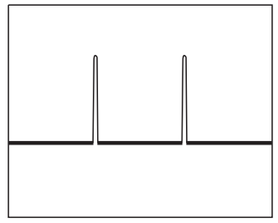
4.6 Vp-p (1 kHz)

⓫ IC162 ㊶ REC/PB



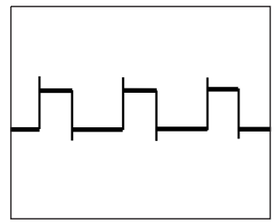
4.2 Vp-p (360 Hz)

⓬ IC162 ㊼ REC/PB



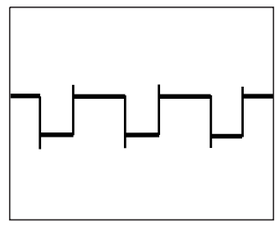
4.8 Vp-p (2 V)

⓭ IC162 ㊶ REC



5 Vp-p (2 V)

⓮ IC162 ㊷ REC



5 Vp-p (2 V)

MA-400 (Hi-Fi AUDIO) SCHEMATIC DIAGRAM **• See page 4-5 for printed wiring board.**

– Ref. No.: MA-400 board; 1,000 series –

MA-400 BOARD (4/8)

NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE

SIGNAL PATH

	AUDIO SIGNAL
REC	⇒
PB	⇨

IC301
Hi-Fi AUDIO PROCESSOR
IC301
TDA9605H/N2,518

9 MA-400 BOARD (1/8) (SEE PAGE 4-10)
10 MA-400 BOARD (3/8) (SEE PAGE 4-13)
15 MA-400 BOARD (8/8) (SEE PAGE 4-26)
16 MA-400 BOARD (6/8) (SEE PAGE 4-21)
17 MA-400 BOARD (5/8) (SEE PAGE 4-19)

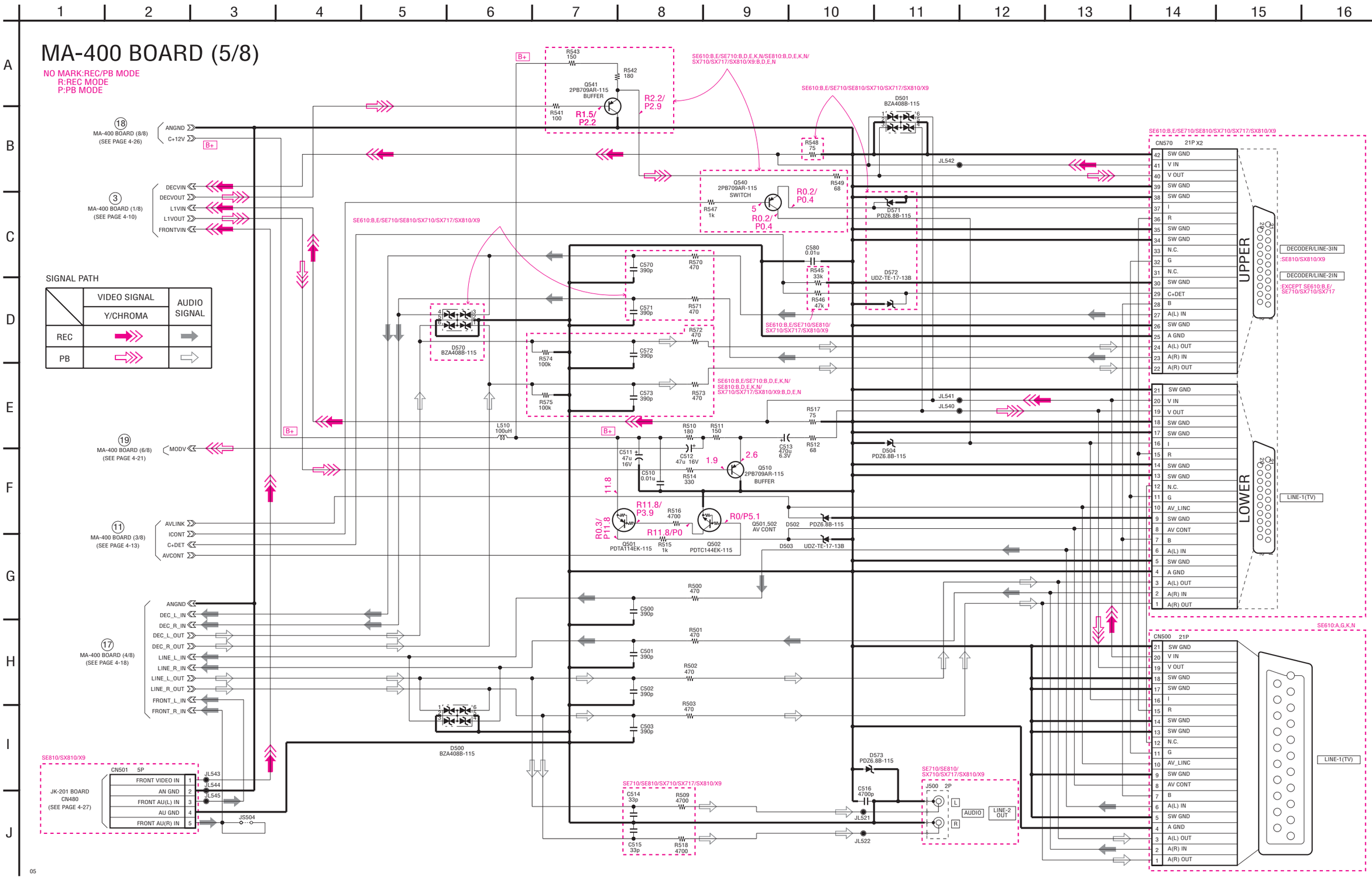
SE610:B,E/SE710:B,D,E,K,N/SE810:B,D,E,K,N/SX710/SX717/SX810/X9:B,D,E,N

SE610:B,E/SE710/SE810/SX710/SX717/SX810/X9

SE810/SX810/X9

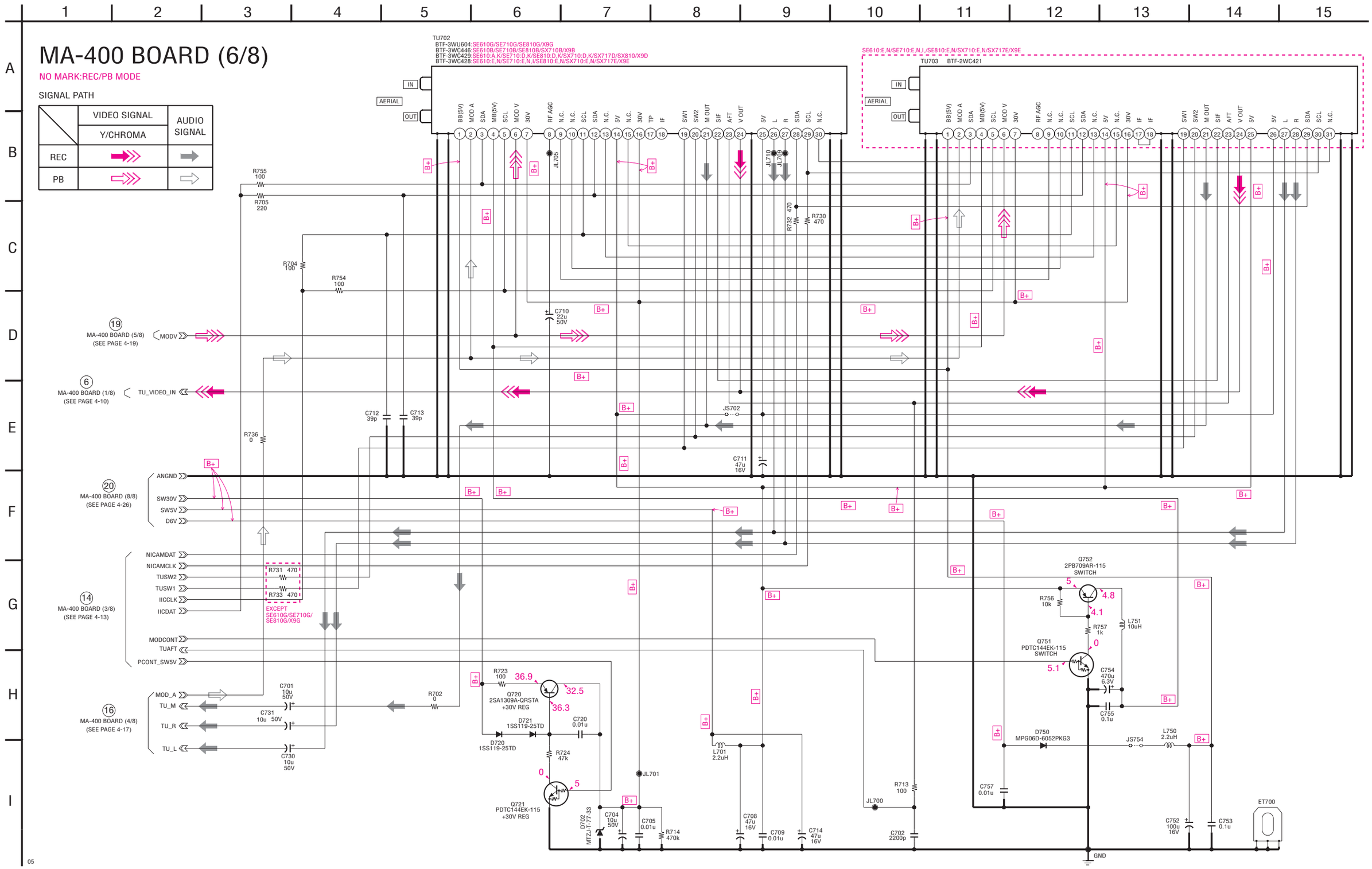
Hi-Fi AUDIO
MA-400 (4/8)

MA-400 (I/O) SCHEMATIC DIAGRAM • **See page 4-5 for printed wiring board.**
– Ref. No.: MA-400 board; 1,000 series –



MA-400 (TUNER) SCHEMATIC DIAGRAM • **See page 4-5 for printed wiring board.**

– Ref. No.: MA-400 board; 1,000 series –



MA-400 (MODE CONTROL) SCHEMATIC DIAGRAM • **See page 4-5 for printed wiring board.**

– Ref. No.: MA-400 board; 1,000 series –

MA-400 BOARD (7/8)

NO MARK:REC/PB MODE

*:IMPOSSIBLE TO MEASURE THE VOLTAGE AT THE MARKED POINTS.

21 MA-400 BOARD (8/8) (SEE PAGE 4-26)

-11V, -F, +F, D5V, DGND, ANGND

12 MA-400 BOARD (3/8) (SEE PAGE 4-13)

REMOCON, FLDSDA, FLDSCLK, FLDCS, FUKEY1, FUKEY2, DMS+, DMS-, JOG_LED_CONT, KKP+, KKP-

SE810/SX810/X9

CN460 11P

KKP-	1	JL432
KKP+	2	JL433
JOG LED CONT	3	JL423
D5V	4	JL424
DMS-	5	JL425
DMS+	6	JL426
A/D2 GO	7	JL427
A/D2 RTN	8	JL428
A/D1 RTN	9	JL429
A/D1 GO	10	JL430
DGND	11	JL431

DS-95 BOARD CN451 (SEE PAGE 4-27)

SE610/SE710/SX710/SX717

CN461 5P

A/D2 GO	1	
A/D2 RTN	2	
A/D1 RTN	3	
A/D1 GO	4	
D GND	5	

DS-95 BOARD CN453 (SEE PAGE 4-27)

7 MA-400 BOARD (1/8) (SEE PAGE 4-10) AD1

IC460 REMOTE CONTROL RECEIVER

IC460 SFH5110-40 (OUT, GND, VCC)

L460 47uH, R427 47, C427 220u 6.3V

R422 0, R421 0, R420 0

R423 82k, C420 47u 16V, C423 0.01u

IC420 FL DRIVER IC420 UPD16315GB-3BS

LED1(IRDREC), LED2, LED3, LED4, OSC, DOUT, DIN, CLK, CS, KEY1, KEY2

VSS, VDD, G1, G2, G3, G4, G5, G6, G7, G8, G9

S1, S2, S3, S4, S5, S6, S7, S8, S9

G10, S18, S17, VEE, S16, S15, S14, S13, S12, S11, S10

ND420 FLUORESCENT INDICATOR TUBE

F-, F-, G1, G2, G3, G4, G5, G6, N.C., P17, P16, P15, P14, P13, P12, P11, P10, P9, P8, P7, P6, P5, P4, P3, P2, P1, F+, F+

C424 10u 50V

R460 10k, R461 330, R470 10k, R471 330, D424 STZ6.8N-T146

JL460, S460 (I / ⏻)

R465 3300, R466 4700, R467 6800, R468 15k

JL463, JL464, S464 AUDIO DUB, S463 PROGRAM+

SE810/SX810/X9

R464 47k

R477 6800, R478 15k, R479 47k

JL476, JL477, JL478, S478 SYNCHRO REC

S476 PROGRAM-, S477 AUTO SET UP/ RF CHANNEL

SE710/SE810/ SX710/SX717/SX810/X9

05

MA-400 (POWER SUPPLY) SCHEMATIC DIAGRAM • **See page 4-5 for printed wiring board.**
– Ref. No.: MA-400 board; 1,000 series –

MA-400 BOARD (8/8)

NO MARK:REC/PB MODE

IC601
C+12V REG

IC601
PQ12RD08
13V 12V GND CONT
1 2 3 4
13.3 11.9 3.2

R624 10k 11.2
Q612 2SB1122-ST-TD SWITCH
11.9 11.9
R625 4700
0 4.9
Q613 PDTC144EK-115 SWITCH
JL624
R626 1k
C618 22u 50V
C611 47u 25V
C612 0.01u
C613 100u 16V
R618 1800
R617 1k
JL625

C621 220u 6.3V
5.9 R611 1k
5.1 R615 820
0.1 4.9
Q607 2SB1122-ST-TD
Q608 PDTC144EK-115
5.9
Q607,608 C+5V SWITCH
PS602 0.25A
D603 MPG06D-6052PKG3
JL627
JS603
SE610:A,G,K,N
SE610:B,E/SE710/SE810/SX710/SX717/SX810/X9
JS604

D607 MPG06D-6052PKG3
D606 MPG06D-6052PKG3
JL421
JL626

CN600 19P
AN GND	1
OSDVCC	2
CAPSTAN VCC	3
CAPSTAN VCC	4
MTR 12V	5
MTR 12V	6
MTR GND	7
MTR GND	8
P CONT M24V	9
P CONT M18V	10
P CONT M12V	11
13V	12
SW12V	13
D6V	14
SW5V	15
SW5V	16
AN GND	17
AN GND	18
AN GND	19

JL600 JL628 JL601 JL602 JL603 JL604 JL605 JL606 JL607 JL608 JL609 JL610
R627 1M

SRV938EK BOARD
CN201
(SEE PAGE 4-34)

CN601 7P
-11V CONT	1
38V	2
-11V	3
+F	4
D GND	5
-F	6
D GND	7

JL613 JL614 JL615 JL616 JL617 JL618 JL619

SRV938EK BOARD
CN202
(SEE PAGE 4-34)

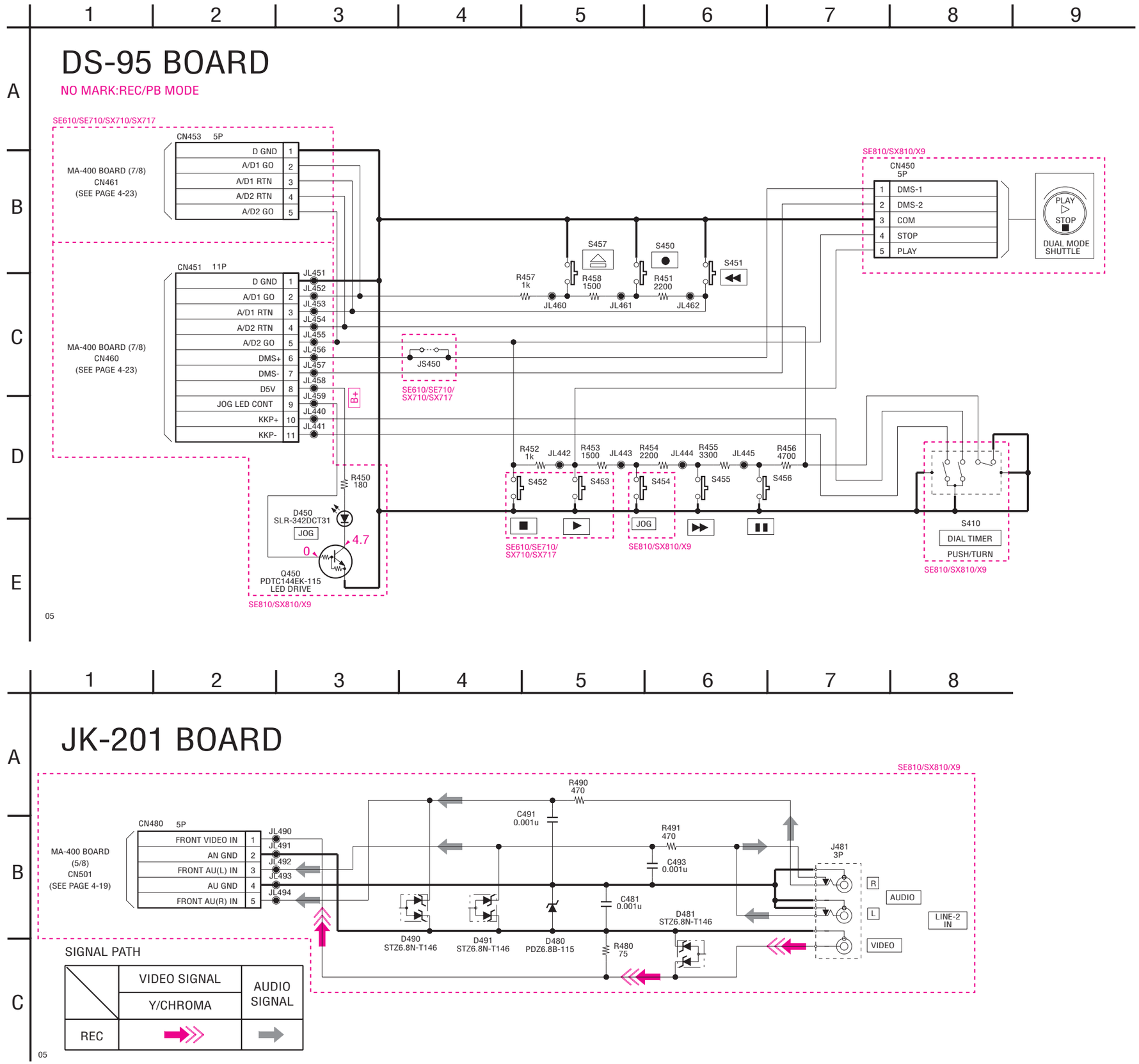
B+ B- 05

B+ C+12V SW5V → (15) MA-400 BOARD (4/8) (SEE PAGE 4-17)
B+ C+12V ANGND → (18) MA-400 BOARD (5/8) (SEE PAGE 4-19)
B+ C+12V SW5V ANGND C+5V → (8) MA-400 BOARD (1/8) (SEE PAGE 4-10)
B+ SW5V ANGND D6V SW30V → (20) MA-400 BOARD (6/8) (SEE PAGE 4-21)
B+ OSDVCC SW12V SW5V ANGND CAPSTANVCC MTR12V MTRGND D5V_BACKUP D5V DGND C+/SW12VCONT PCONT_SW5V PCONT_M24V PCONT_M18V PCONT_M12V -11VCONT → (13) MA-400 BOARD (3/8) (SEE PAGE 4-13)
B+ ANGND D5V -11V +F DGND -F B- → (21) MA-400 BOARD (7/8) (SEE PAGE 4-23)

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

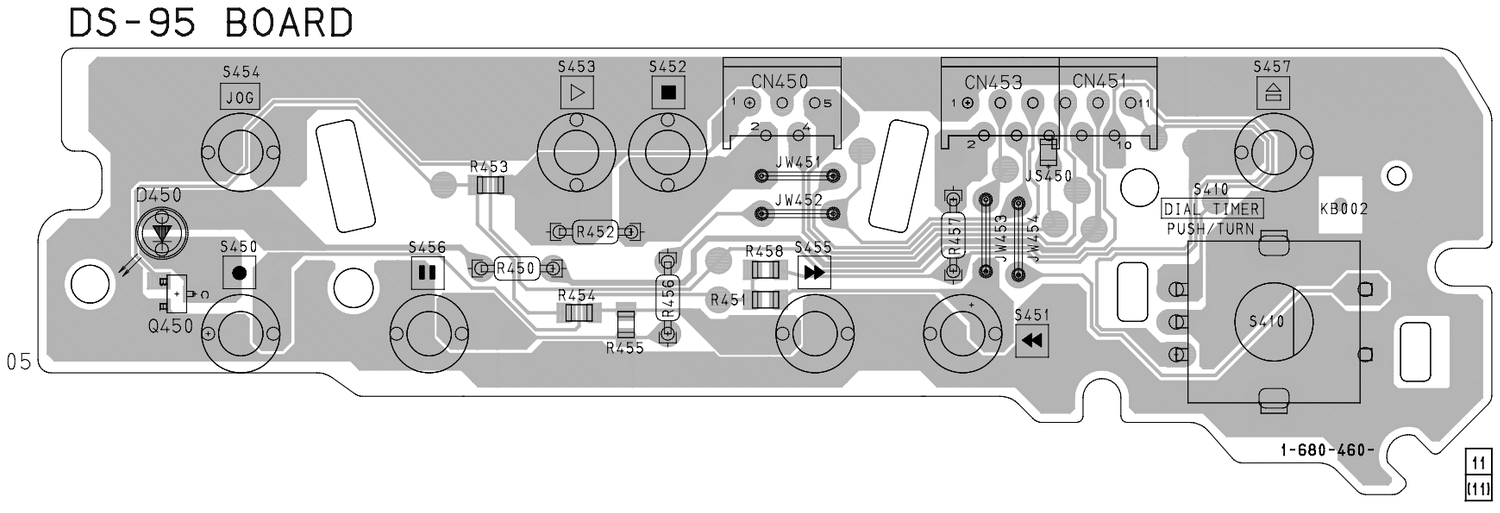
DS-95 (MODE CONTROL), JK-201 (FRONT IN) SCHEMATIC DIAGRAM

– Ref. No.:DS-95 board, JK-201 board; 1,000 series –

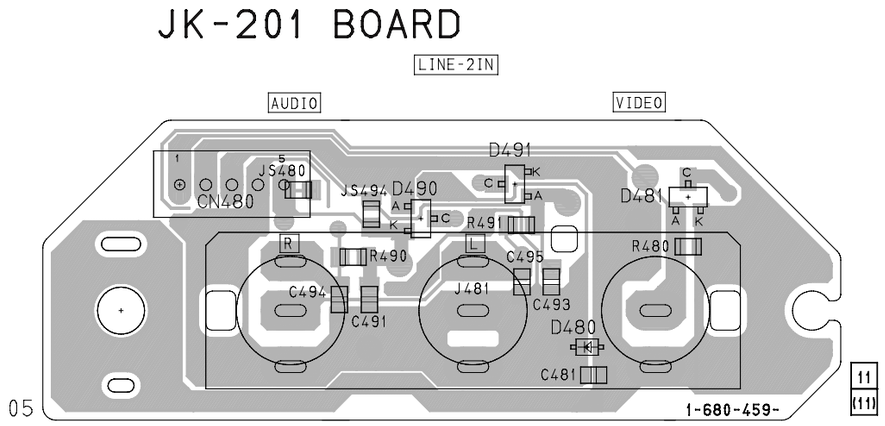


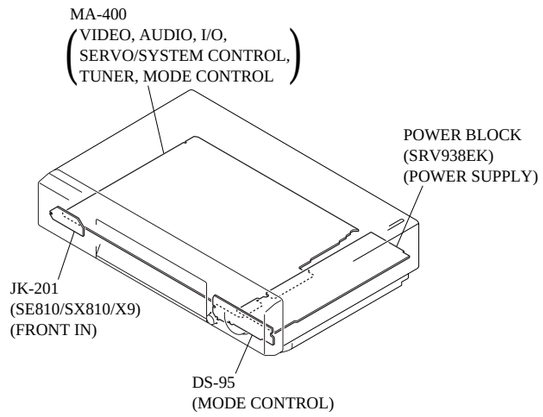
DS-95 (MODE CONTROL) PRINTED WIRING BOARD
– Ref. No.: DS-95 board; 1,000 series –

There are a few cases that the part isn't mounted in this model is printed on this diagram.



JK-201 (FRONT IN) PRINTED WIRING BOARD
– Ref. No.: JK-201 board; 1,000 series –





SRV938EK (POWER SUPPLY) PRINTED WIRING BOARD

– Ref. No.: SRV938EK board; 2,000 series –

There are a few cases that the part isn't mounted in this model is printed on this diagram.

SRV938EK BOARD

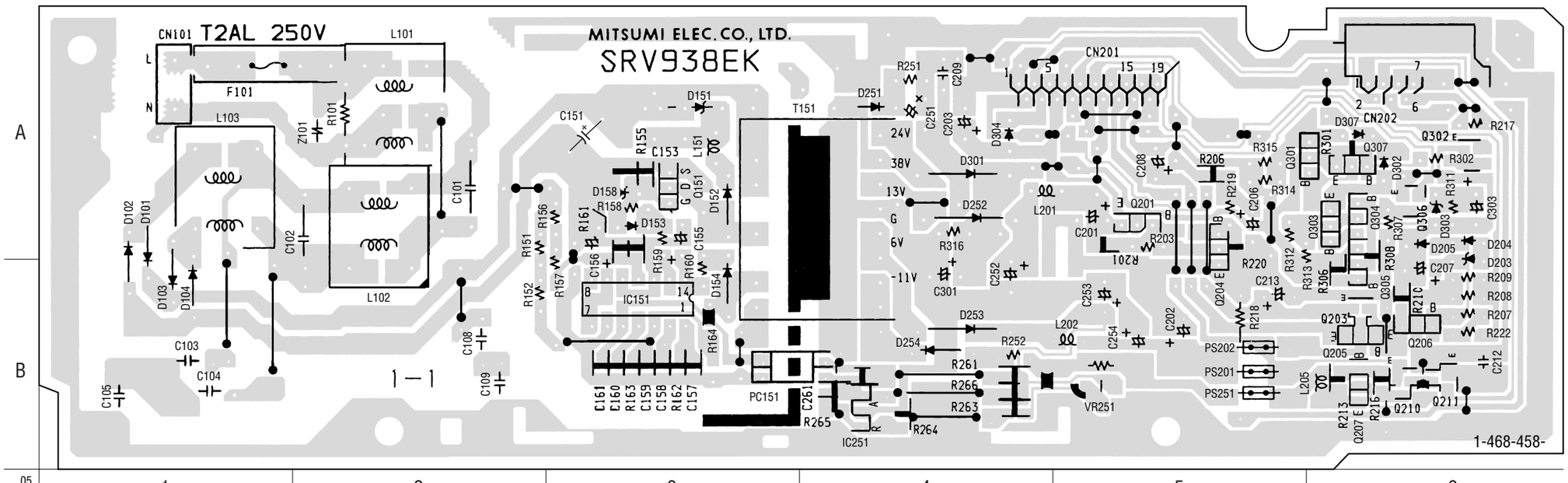
CN101 A-1
CN201 A-5
CN202 A-6

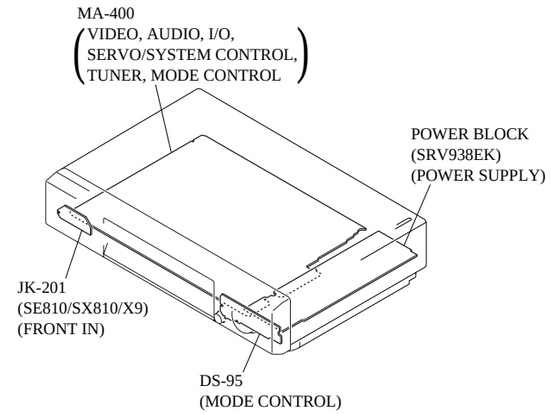
D101 B-1
D102 B-1
D103 B-1
D104 B-1
D151 A-3
D152 A-3
D153 A-3
D154 B-3
D158 A-3
D203 B-6
D204 A-6
D205 A-6
D251 A-4
D252 A-4
D253 B-4
D254 B-4
D301 A-4
D302 A-6
D303 A-6
D304 A-4
D307 A-6

IC151 B-3
IC251 B-4

Q151 A-3
Q201 A-5
Q203 B-6
Q204 B-5
Q205 B-6
Q206 B-6
Q207 B-6
Q210 B-6
Q211 B-6
Q301 A-5
Q302 A-6
Q303 A-6
Q304 A-6
Q305 B-6
Q306 A-6
Q307 A-6

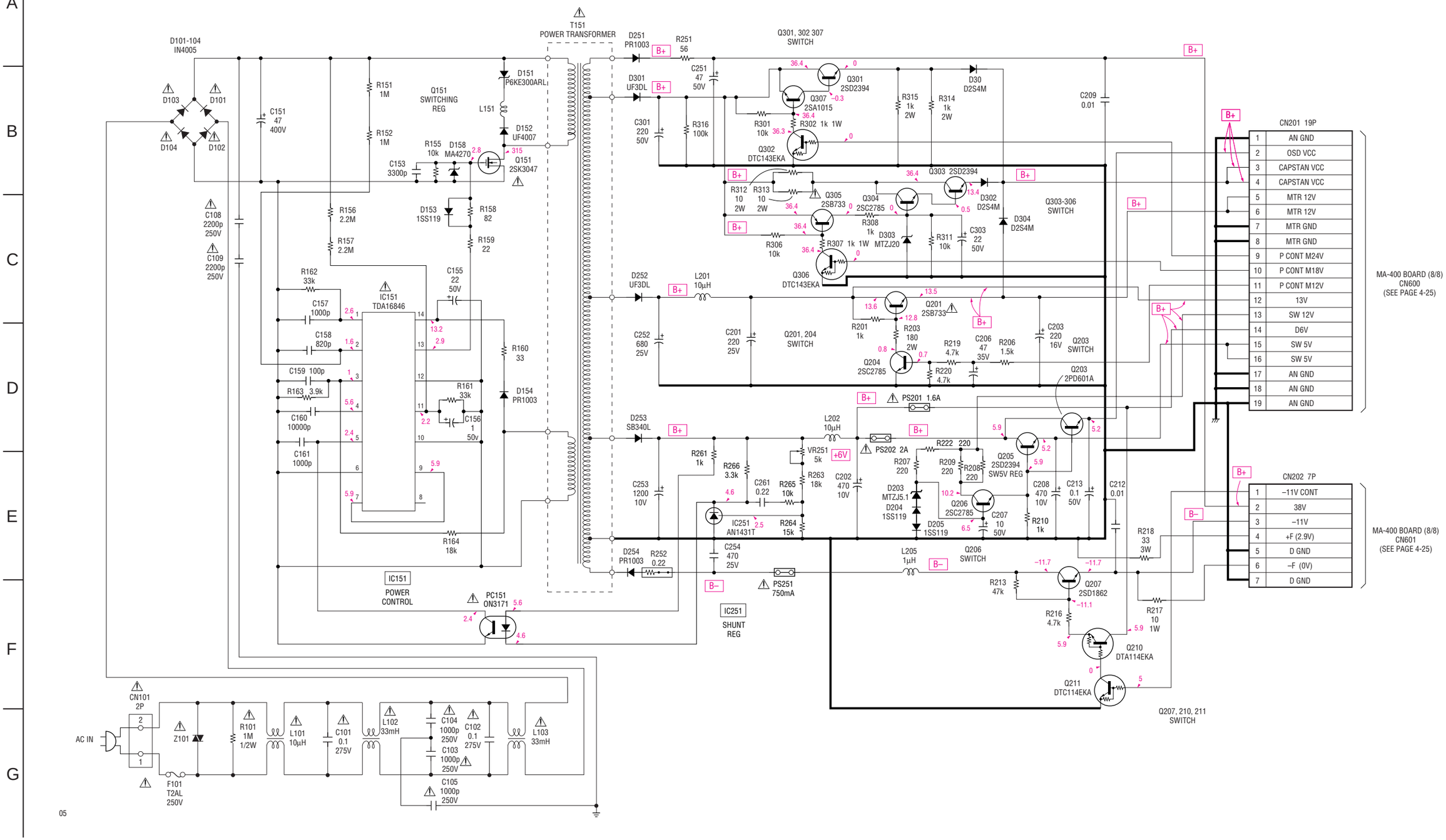
SRV938EK BOARD





SRV938EK (POWER SUPPLY) SCHEMATIC DIAGRAM
– Ref. No.: SRV938EK board; 2,000 series –

SRV938EK BOARD



Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

5-1. SYSTEM CONTROL – VIDEO BLOCK INTERFACE (MA-400 BOARD IC162)

Signal	Pin No.	I/O	STOP/ FF/ REW	TAPE LOADING	TAPE UNLOADING	PB	REC	REC • PAUSE
RF SWP	MA-400 IC162㉔	O	*1	*1	*1	*1	*1	*1
QVD	MA-400 IC162⑲	O	L	L	L	*2	L	L
C V IN	MA-400 IC162㊹	I	*3	*3	*3	*3	*3	*3

∗1. 25 Hz pulse with 50% duty cycle. Synchronized with rotation of drum.
∗2. Normally "L". "H" when video signal is not generated.
∗3. Composite sync signal (positive polarity).

5-2. SYSTEM CONTROL – SERVO PERIPHERAL CIRCUIT INTERFACE (MA-400 BOARD IC162)

Signal	Pin No.	I/O	STOP	FF	REW	TAPE LOADING	TAPE UNLOADING	PB	REC
CTL IN+	MA-400 IC162⑫	I/O	*7	*7	*7	*7	*7	*7	*1
DRUM PG	MA-400 IC162⑰	I	*3	*3	*3	*3	*3	*3	*3
DRUM FG	MA-400 IC162⑱	I	*4	*4	*4	*4	*4	*4	*4
CAP FG	MA-400 IC162⑭	I	H/L	*2	*2	*5	*5	*2	*2
CAP RVS	MA-400 IC162㊲	O	H/L	L	H	L	H	L	L
CAP ERR	MA-400 IC162㊵	O	L	*6	*6	*6	*6	*6	*6
DRUM ERR	MA-400 IC162㊴	O	*6	*6	*6	*6	*6	*6	*6

∗1. 25 Hz pulse.
∗2. Pulse of period in proportion to tape speed.
∗3. 25 Hz "H" pulse.
∗4. 330 Hz pulse.
∗5. Unstable period pulse.
∗6. DC voltage 1 to 5V
∗7. Hi-Z (2.5V)

5-3. SYSTEM CONTROL – MECHANISM BLOCK INTERFACE (MA-400 BOARD IC162)

Signal	Pin No.	I/O	EJECTED	CASSETTE LOADING	CASSETTE UNLOADING	TAPE THREAD-ING	TAPE UNTHREAD-ING	STOP	FF	REW	PB	REC
CAM	MA-400 IC162㊻	O	M	H/M	L/M	H/M	L/M	M	M	M	M	M
MODE 1	MA-400 IC162㊷	I	H	–	–	L	L	H	H	H	H	H
MODE 2	MA-400 IC162㊶	I	H	–	–	L	L	H	H	H	L	L
MODE 3	MA-400 IC162㊵	I	L	–	–	H	H	H	L	L	L	L
MODE 4	MA-400 IC162㊴	I	L	–	–	H	H	L	H	H	L	L
REC PRF	MA-400 IC162㊸	I	L	*1	*1	*1	*1	*1	*1	*1	*1	*1
T REEL	MA-400 IC162㊸	I	H/L	H/L	H/L	H/L	H/L	H/L	*2	*2	*2	*2
S REEL	MA-400 IC162㊹	I	H/L	H/L	H/L	*2	*2	H/L	*2	*2	*2	*2
END LED	MA-400 IC162㉖	O	L	L	L	*3	*3	*3	*3	*3	*3	*3
T SENS	MA-400 IC162⑩	I	*3	*3	*3	*4	*4	*4	*4	*4	*4	*4
S SENS	MA-400 IC162⑨	I	*3	*3	*3	*4	*4	*4	*4	*4	*4	*4

∗1. “L” when erasing protection tab is bent. “H” when not bent.
∗2. Pulse of period in proportion to reel rotating speed.
∗3. Approx. 2 msec period “H” pulse.
∗4. Normally “L”. 2 msec period “H” pulse when tape top or tape end is detected.

5-4. SYSTEM CONTROL – SYSTEM CONTROL PERIPHERAL CIRCUIT INTERFACE (MA-400 BOARD IC162)

Signal	Pin No.	I/O	I/O Level
RESET	MA-400 IC162㊷	I	Normally “H”, “L” when service interruption is detected or restored.
NICAM DATA	MA-400 IC162㊽	O	Serial communication data to Tuner.
NICAM CLK	MA-400 IC162㊼	O	Serial communication clock to with Tuner.

5-5. SYSTEM CONTROL – AUDIO BLOCK INTERFACE (MA-400 BOARD IC162)

Signal	Pin No.	I/O	STOP/ FF/ REW	TAPE LOADING	TAPE UNLOADING	PB	REC	PB • PAUSE
A MUTE	MA-400 IC162㊹	O	L	L	L	L	L	H

5-6. SERVO/SYSTEM CONTROL MICROPROCESSOR PIN FUNCTION (MA-400 BOARD IC162)

Pin No.	Pin Name	I/O	Function
1	NC	–	Not used (open)
2	NC	–	Not used (open)
3	NC	–	Not used (open)
4	NC	–	Not used (open)
5	24V CONT	O	24 V power control signal
6	DEST1	I	Destination identification input 1
7	DEST2	I	Destination identification input 2
8	TU AFT	I	AFT input from TUNER for station selection
9	S SENS	I	Tape end sensor input
10	T SENS	I	Tape top sensor input
11	RF ENV	I	Video RF envelope input
12	AF ENV	I	HiFi envelope input
13	FU KEY2	I	Function key input (9 keys)
14	FU KEY1	I	Function key input (9 keys)
15	POWER KEY	I	Not used (open)
16	MOD CONT	O	RF modulator ON/OFF control
17	KKP +	I	KKP 2-phase pulse B input
18	KKP -	I	KKP 2-phase pulse A input
19	QVD	O	Quasi VD pulse
20	NC	–	Not used (open)
21	CROT	O	Head azimuth information
22	HA SW	O	SP/EP head switching signal
23	ENV S	I	Identification signal of SP/EP head output comparison & detection
24	RF SWP	O	Video RF switching pulse output
25	AF SWP	O	HiFi switching pulse output
26	END LED	O	End sensor LED output
27	AV CONT	O	EURO 21 pin AV CONT signal output
28	AF REC P	O	HiFi record control signal
29	FULL ERS	O	Full erase control signal for A DUB
30	VSS	–	Ground terminal
31	17.734475MHz (in)	I	Main clock input
32	17.734475MHz (out)	O	Main clock output
33	VCC	–	“Power supply input terminal (high speed mode: 4.0 to 5.5V, low speed mode: 2.6 to 5.5V)”
34	32kHz (in)	I	Sub clock input
35	32kHz (out)	O	Sub clock output
36	TEST	I	test terminal
37	CAP RVS	O	Inverted capstan signal
38	I CONT	O	EURO 21 pin-I CONT signal output
39	MODE 4	I	Cam encode data 4
40	MODE 3	I	Cam encode data 3
41	MODE 2	I	Cam encode data 2
42	MODE 1	I	Cam encode data 1
43	REC PRF	I	Safety tab detection input
44	IIC CLK1 (EEP)	O	IIC clock (EEPROM control)
45	IIC DATA1 (EEP)	I/O	IIC data (EEPROM control)
46	CAM	O	Cam motor control signal
47	NC	–	Not used (open)
48	NC	–	Not used (open)
49	NC	–	Connected to Ground

Pin No.	Pin Name	I/O	Function
50	OSC CHARA (IN)	I/O	Clock input for OSD character size
51	OSC CHARA (OUT)	I/O	Clock output for OSD character size
52	RESET	I	Reset input
53	OSD LPF	I/O	“External filter that doubles the FSC, is connected to this terminal”
54	LP	O	“L” at SP, “H” at EP/LP”
55	OSD VCC	–	Power supply input terminal for OSD/slicer (4.75 V to 5.25 V)
56	OSD V IN	I	Video signal input for OSD overlay
57	OSD GND	–	Ground terminal of OSD/slicer
58	OSD W LEVEL	I	OSD white level input
59	CLK SEL	I	“Selection of oscillation clock when reset is canceled “L”: sub clock, “H”: main & sub clocks”
60	MD0	–	Connected to Ground
61	OSD V OUT	O	OSD video signal output
62	HLF (SLICER LPF)	I/O	LPF connection terminal for slicer/AFC (This terminal is used as the HLF terminal when C. Video is input to pin-56.)
63	OSD SECAM C IN	I	Color signal input for SECAM OSD
64	C V IN (C SYNC IN)	I	“Video signal input for tuner’s station selection, OSD and servo sync signal detection (after passing filter)”
65	DMS +	I	DMS 2-phase pulse 1 input
66	DMS -	I	DMS 2-phase pulse 2 input
67	TU SW1	O	Tuner system BG/L selection signal
68	NC	–	Not used (open)
69	DEC/VTR	O	Decoder/VTR switching Not used (open)
70	PDC DAV	I	PDC/VPS signal reception identification input
71	AV CONT IN/C+DET	I	CANAL + connection identification input
72	DIV CLK OUT/JOGLED CONT	O	Terminal of using JOG LED output or adjustment made output of clock dividing frequency
73	TA MUTE	O	Tuner audio mute signal output
74	A MUTE	O	Audio mute signal output
75	MTR12V CONT	O	Motor 12 V power control signal
76	FROM AV LINK	I	AV-LINK data input for communication
77	REMOCON	I	Remote control SIRCS signal input
78	P FAIL	I	Power failure detection input
79	DRUM ERR	O	Drum error output
80	CAP ERR	O	Capstan error output
81	SAT CONT	I	SAT control signal
82	-11V CONT	O	Power save control
83	TO AV LINK	O	AV-LINK data output for communication
84	C+5V CONT	O	Power save control
85	NC	–	Not used (open)
86	FLD CLOCK	O	Serial clock CH0 (FLD)
87	18V CONT	O	18 V power control signal
88	TO FLD DATA	O	Serial data out CH0 (FLD)
89	$\overline{\text{SECAM ON}}$	O	SECAM ON signal/surround audio control (switched by destination)
90	FLD CS	O	Chip selection signal for display tube driver
91	SW5V CONT	O	SW 5 V power control signal
92	TU SW2	O	Tuner system BGL/L selection signal
93	T REEL	I	Take up reel sensor input
94	S REEL	I	Supply reel sensor input
95	NC	–	Not used (open)

Pin No.	Pin Name	I/O	Function
96	NC	–	Not used (open)
97	NICAM CLK	O	Clock for NICAM-ZWEI control
98	NICAM DATA	O	Data for NICAM-ZWEI control
99	SCL (VI/HF/TU/ARC/ MOD/VPS)	I/O	IIC clock (video/HiFi/tuner/ARC/modulator/VPS control)
100	SDA (VI/HF/TU/ARC/ MOD/VPS)	I/O	IIC data (video/HiFi/tuner/ARC/modulator/VPS control)
101	NC	–	Not used (open)
102	NC	–	Not used (open)
103	SECAM DET	I	SECAM identification input
104	CAP FG	I	Capstan FG input
105	AMP VSS	–	Ground terminal for analog amplifier (connected to Vss)
106	DRUM FG	I	Drum FG input
107	DRUM PG	I	Drum PG input
108	AMP VREF OUT	–	Analog amplifier reference power supply output terminal
109	AMP VREF IN	–	Analog amplifier reference power supply output terminal
110	NC	–	Connected to Ground
111	CTL IN-	I/O	CTL signal input/output terminal
112	CTL IN+	I/O	CTL signal input/output terminal
113	AMPC	–	CTL amplifier AC Ground terminal
114	CTL AMP OUT	O	CTL amplifier output
115	AMP VCC	–	Power supply input terminal for analog amplifier (connected to Vcc)
116	AVCC	–	Power supply input and reference voltage input to A-D converter

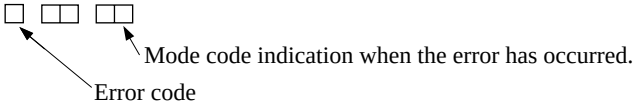
5-7. MODE CONTROL PIN FUNCTION (MA-400 BOARD IC420)

Pin No.	Pin Name	I/O	Function
1	LED1	O	Not used (open)
2	LED2	O	Not used (open)
3	LED3	O	Not used (open)
4	LED4	O	Not used (open)
5	OSC	–	Terminal for osciration
6	D OUT	O	Not used (open)
7	D IN	I	FLD IIC BUS (data) input
8	CLK	I	FLD clock
9	CS	I	FLD chip select input
10	KEY1	I	Ground
11	KEY2	I	Ground
12	VSS	–	Ground
13	VDD	–	Power supply (D5V)
14	S1	O	Segment terminal 1
15	S2	O	Segment terminal 2
16	S3	O	Segment terminal 3
17	S4	O	Segment terminal 4
18	S5	O	Segment terminal 5
19	S6	O	Segment terminal 6
20	S7	O	Segment terminal 7
21	S8	O	Segment terminal 8
22	S9	O	Segment terminal 9
23	S10	O	Segment terminal 10
24	S11	O	Segment terminal 11
25	S12	O	Segment terminal 12
26	S13	O	Segment terminal 13
27	S14	O	Segment terminal 14
28	S15	O	Segment terminal 15
29	S16	O	Segment terminal 16
30	VEE	–	Power supply (–11V)
31	S17	O	Segment terminal 17
32	S18	O	Segment terminal 18 Not used (open)
33	G10	O	Grid terminal 10 Not used (open)
34	G9	O	Grid terminal 9 Not used (open)
35	G8	O	Grid terminal 8 Not used (open)
36	G7	O	Grid terminal 7 Not used (open)
37	G6	O	Grid terminal 6
38	G5	O	Grid terminal 5
39	G4	O	Grid terminal 4
40	G3	O	Grid terminal 3
41	G2	O	Grid terminal 2
42	G1	O	Grid terminal 1
43	VDD	–	Power supply (D5V)
44	VSS	–	Ground

SECTION 6
ERROR CODES

6-1. ERROR CODE INDICATION

- Error codes are indicated using the lower 5 digits in the fluorescent display tube.
  "At this time, Colon ":"between character is not indicated."



ERROR CODE

0	No error
1	Cam encoder error Loading direction
2	Cam encoder error Unloading direction
3	T reel error
4	S reel error
5	Capstan error
6	Drum error
7	Error on initializing
8	Cassette loading error
9	Reserve

MODE CODE

0	Power-on eject	10	FWD x1	20	REW play
1	Power-on initial	11	FWD x2	21	Cas. loading
2	Power-off elect	12	CUE	22	Tape loading
3	Power-off stop	13	PB-pause	23	Power-off loading
4	FF	14	RVS-pause	24	Mecha. error (Power on)
5	REW	15	RVS x1	25	Power-on eject initial
6	REC	16	RVS x2	26	Power-off eject initial
7	REC-pause	17	REV	27	APC REC
8	Power-on stop	18	Power-off initial	28	Cas. loading
9	PB	19	Mecha. error (Power off)		(No auto PB check)

SECTION 7
ADJUSTMENTS

During the adjustment, see the Parts Arrangement Diagram for Adjustments on Page 7-6.

7-1. MECHANICAL ADJUSTMENTS

Refer to the SERVICE MANUAL of VHS MECHANICAL ADJUSTMENT VI.

7-2. ELECTRICAL ADJUSTMENTS

2-1. PRE-ADJUSTMENT PREPARATIONS

Necessary items and indications for total adjustment of electric circuit of this machine will be described in this chapter.

2-1-1. Instruments to be Used

1) Color TV
2) Oscilloscope 1 or 2 phenomena, band more than 30 MHz, delay mode, as provided.
3) NTSC pattern generator
4) PAL pattern generator
5) Digital voltmeter
6) Audio level meter
7) Audio noise meter
8) Audio generator
9) Attenuator
10) Alignment tape
    Part Code: 8-192-605-36 KRV-51P (PAL)
    Part Code: 8-192-605-32 KRV-51N2 (NTSC)

2-1-2. Connection

Unless otherwise specified, connect and adjust the measuring instruments as shown in the following diagram.

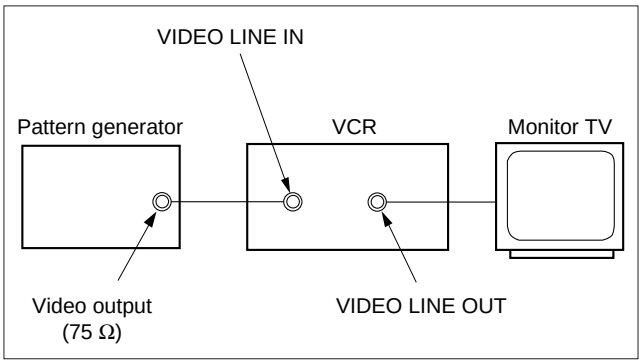


Fig. 7-2-1

2-1-3. Set-up of Adjustment

In this adjustment, PAL or NTSC pattern generator is connected with LINE input signal terminal. When checking with tuner, connected AERIAL terminal. Check that the amplitudes of video signal SYNC signal, of picture portions, and of burst signals are flat at approximately 0.3, 0.7 and 0.3 V, respectively, and that the level ratio of the burst signal and "red" signal are 0.30: 0.66. Fig. 7-2-2. shows video signals (color bars) used in adjusting the video section.

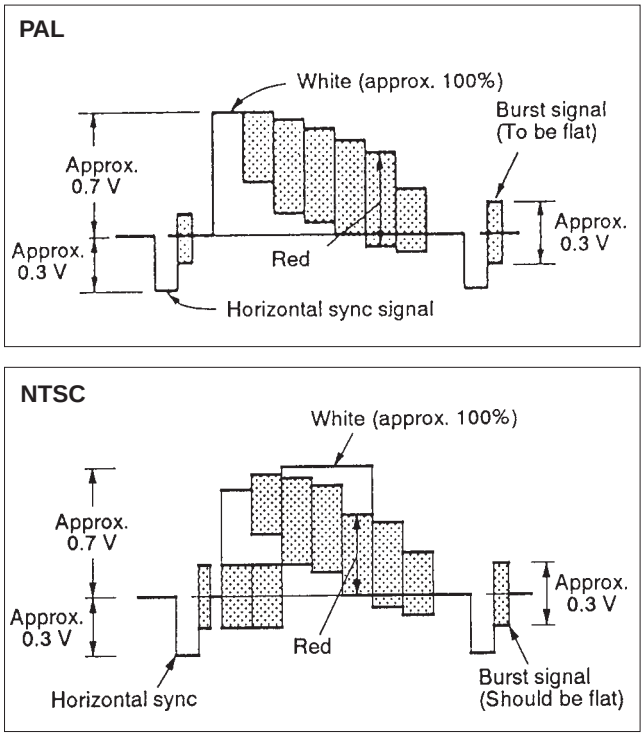


Fig. 7-2-2

2-1-4. Alignment Tapes [Alignment Tape (KRV-51N2/KRV-51P)]

	Mode	Time	Video signal	Audio signal (HiFi/Normal)
1	SP	Seven minutes	Color bar	400 Hz
2	SP	Three minutes	Monoscope	
3	EP	Seven minutes	Color bar	
4	EP	Three minutes	Monoscope	

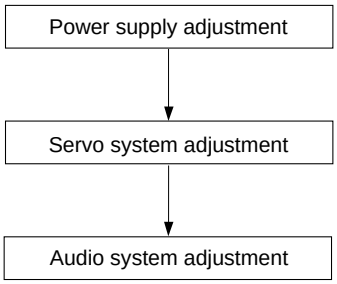
2-1-5. Specified I/O Level and Impedance

Input/output terminal

Video inputs	LINE IN : phono jack 1 Vp-p, 75 Ω, unbalanced, sync negative
Audio inputs	LINE IN : phono jacks 47 kW, –7.5 dBs (0 dBs = 0.775 Vrms) More than 10 kW, –4 dBs
Video outputs	LINE OUT: phono jack 1 Vp-p, 75 Ω, unbalanced, sync negative
Audio outputs	LINE OUT: phono jacks –7.5 dBs at load impedance 47 kΩ Output impedance : less than 10 Ω

2-1-6. Adjusting Sequence

Make the electrical adjustment in the following sequence.



2-2. POWER SUPPLY ADJUSTMENTS

2-2-1. Power Supply Check (SRV938EK BOARD)

Mode	E-E
Measuring Instrument	Digital voltmeter
MTR12 V check	
Measurement Point	Pin ⑤, ⑥ of CN201
Specified Value	13.5 ±0.4 V
D6 V check	
Measurement Point	Pin ⑭ of CN201
Specified Value	5.9 ± 0.2 V
+13 V check	
Measurement Point	Pin ⑫ of CN201
Specified Value	13.6 ± 0.5 V
+38 V check	
Measurement Point	Pin ② of CN202
Specified Value	35.0 ± 3.5 V
SW 5 Vcheck	
Measurement Point	Pin ⑮, ⑯ of CN201
Specified Value	5.2 ± 0.2 V
+F, –F check	
Measurement Point	Pin ④, ⑥ of CN202
Specified Value	$2.9^{+0.6}_{-0.3}$ V
–11 V check	
Measurement Point	Pin ③ of CN202
Specified Value	–11.5 ± 1.0 V

Checking Method:

1) Confirm that each voltage meets its specified value.

2-2-2. +6 V Adjustment (SRV938EK BOARD)

Mode	REC or PB
Measuring Instrument	Digital voltmeter
Measurement Point	Pin ⑭ of CN201
Adjusting Element	VR251
Specified Value	5.9 ± 0.2 V

2-3. SERVO SYSTEM ADJUSTMENT

2-3-1. RF Switching Position Adjustment (MA-400 BOARD)

Purpose:

Adjust the interval between A ch and B ch of tape playback output.

Improve the interchangeability with other tapes and sets.

When it is out of order, the interval appears on the screen, the screen is disturbed.

Mode	PB
Signal	Alignment tape SP mode color bar
Measurement Point	CH1: VIDEO LINE OUT CH2: Pin ② of CN262 (RF SWP)
Measuring Instrument	Oscilloscope
Specified Value	6.5 ± 0.5 H (416 ± 32 µsec) PAL 6.5 ± 0.5 H (410 ± 32 µsec) NTSC

Adjusting Method:

1) During playback, connect MA-400 board CN262 pin ③ and the pin ⑤ for about 1 second to activate the RF switching position adjustment mode.
2) Check appear "A P" on FL display.
3) Using the channel + and – buttons, adjust to 6.5 ± 0.5 H.
4) Press the pause button.

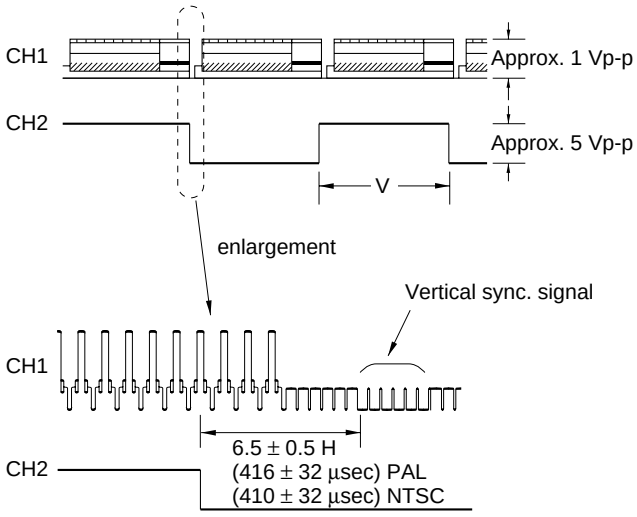


Fig. 7-2-3.

2-4. AUDIO SYSTEM ADJUSTMENTS

• Adjust both Lch and Rch.

[Connection]

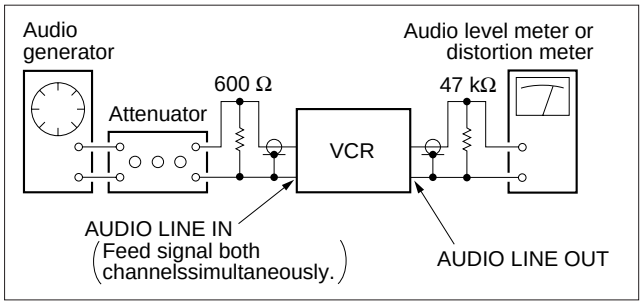


Fig. 7-2-4.

2-4-1. Hi-Fi Audio System Adjustment

• Set switches and knobs to the following positions to make adjustment unless otherwise specified.
INPUT SELECT switch ..... LINE
AUDIO MONITOR ..... STEREO

[Adjustment Sequence]

1. **AF Switching Position Adjustment**
2. **Frequency Response Check**
3. **Overall Level Characteristic and Distortion Factor Check**
4. **Overall S/N Check**

1. AF Switching Position Adjustment (MA-400 BOARD)

Purpose:

Adjust the interval between A CH and B CH of tape playback output. Improve the interchangeability with other tapes and sets. When it is out of order, noisy sound is increased and big noise is heard.

Mode	PB
Signal	Alignment tape SP mode color bar
Measurement point	CH1: Pin ② of CN262 CH2: Pin ① of CN262
Measuring Instrument	Oscilloscope
Specified Value	Fig. 7-2-5

Adjusting Method:

1) During playback, connect MA-400 board CN262 pin ③ and the pin ⑤ for about 1 second to activate the RF switching position adjustment mode.
2) Press the record button to activate the AF switching position adjustment mode.
3) Check appear "A H" on FL display.
4) Using the channels + and – buttons, minimize a chipped portion. At this time, confirm that a noisy sound is not heard.
5) Press the pause button.

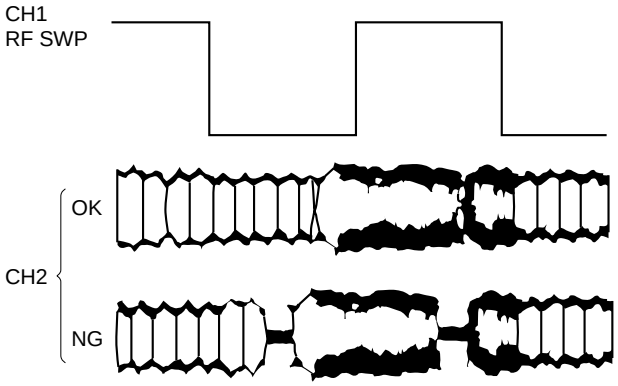


Fig. 7-2-5.

2. Frequency Response Check

Purpose:

Confirm that the frequency characteristic is within the specification.

Mode	REC and PB (SP, LP mode)
Signal	400 Hz, –26.3 dBs 30 Hz, –26.3 dBs 20 kHz, –26.3 dBs
Measurement point	Audio output terminal
Measurement equipment	Audio level meter
Specified value	0 ± 3 dB

Note: Tape path adjustment must have been completed.

Confirmation Method:

1) Supply a signal of 400 Hz, –26.3 dBs to both L and R channels of Audio Line Input.
2) Connect the audio level meter to the Audio Line Output.
3) Adjust the attenuator so that the audio level meter will indicate –26.3 dBs.
4) Make recording.
5) Set an audio line input signal to 30 Hz and make recording.
6) Set an audio line input signal to 20 kHz and make recording.
7) Playback a recorded portion, and measure output levels at 400 Hz and 30 Hz and 20 kHz.
8) Confirm that the 30 Hz and 20 kHz playback output level within a range of the 400 Hz playback output level 0 ± 3 dB.

3. Overall Level Characteristic and Distortion Factor Check

Purpose:
Check the record level, play level, and distortion factor against the reference input.

Mode	REC and PB (SP mode)
Signal	400 Hz, –6.3 dBs
Measurement point	Audio output terminal
Measurement equipment	Audio level meter and distortion factor meter
Specified value	Playback level: –6.3 ± 2.0 dBs Distortion factor: 1% or less

Confirmation Method:
1) Supply an audio signal of 400 Hz, –6.3 dBs simultaneously to both L and R channels of Audio Line Input.
2) Make recording
3) Play back a recorded portion.
4) Confirm that a playback level is –6.3 ± 2.0 dBs.
5) Confirm that a distortion factor is within 1%.

4. Overall S/N Check

Purpose:
Confirm that the S/N is within the specification.

Mode	REC and PB (SP mode)
Signal	Short
Measurement point	Audio output terminal
Measurement equipment	Audio noise meter
Specified value	–67.5 dBs or less

Confirmation Method:
1) Connect both L and R channels of audio line input to the GND.
2) Start recording.
3) Play the recorded part to confirm that the noise is below –67.5 dBs.

2-4-2. Normal Audio System Adjustment

- Make adjustment in the SP mode, unless otherwise specified. Use a normal VHS cassette for an adjustment tape.
- Set AUDIO MONITOR to normal.

[Adjustment Sequence]

1. **ACE Head Adjustment**
2. **E-E Output Level Check**
3. **Frequency Response Check**
4. **Overall Level Characteristic and Distortion Factor Check**
5. **Overall S/N Check**

1. ACE Head Adjustment

Refer to the SERVICE MANUAL of VHS MECHANICAL ADJUSTMENT VI.

2. E-E Output Level Check

Purpose:
Confirm that the output level against the reference input is within the specification.

Mode	E-E
Signal	L, R: 400 Hz, –6.3 dBs
Measurement point	Audio output terminal
Measurement equipment	Audio level meter
Specified value	–6.3 ± 2.0 dBs

Confirmation Method:
1) Simultaneously input a signal of 400 Hz, –6.3 dBs to both L and R channels of Audio Line Input.
2) Confirm that the audio output level is –6.3 ± 2.0 dBs. (This level only can appear with mono models)

3. Frequency Response Check

Purpose:
Confirm that the frequency characteristic is within the specification.

Mode	REC and PB (SP mode)
Signal	400 Hz, –26.3 dBs 7 kHz, –26.3 dBs
Measurement point	Audio output terminal
Measurement equipment	Audio level meter
Specified value	0 ± 3 dB

Tape path adjustment must have been completed.

Confirmation Method:
1) Supply a signal of 400 Hz, –26.3 dBs to both L and R channels of Audio Line Input.
2) Connect the audio level meter to the Audio Line Output.
3) Adjust the attenuator so that the audio level meter will indicate –26.3 dBs.
4) Make recording in the SP mode.
5) Set an audio line input signal to 7 kHz and make recording.
6) Playback a recorded portion, and measure output levels at 400 Hz and 7 kHz.
7) Confirm that the 7 kHz playback output level within a range of the 400 Hz playback output level 0 ± 3 dB.

4. Overall Level Characteristic and Distortion Factor Check

Purpose:
Check the record level, play level, and distortion factor against the reference input.

Mode	REC and PB (SP mode)
Signal	400 Hz, –6.3 dBs
Measurement point	Audio output terminal
Measurement equipment	Audio level meter and distortion factor meter
Specified value	Playback level: –6.3 ± 3.0 dBs Distortion factor: 4% or less

Confirmation Method:
1) Supply an audio signal of 400 Hz, –6.3 dBs simultaneously to both L and R channels of Audio Line Input.
2) Make recording
3) Play back a recorded portion.
4) Confirm that a playback level is –6.3 ± 3.0 dBs.
5) Confirm that a distortion factor is within 4%.

5. Overall S/N Check

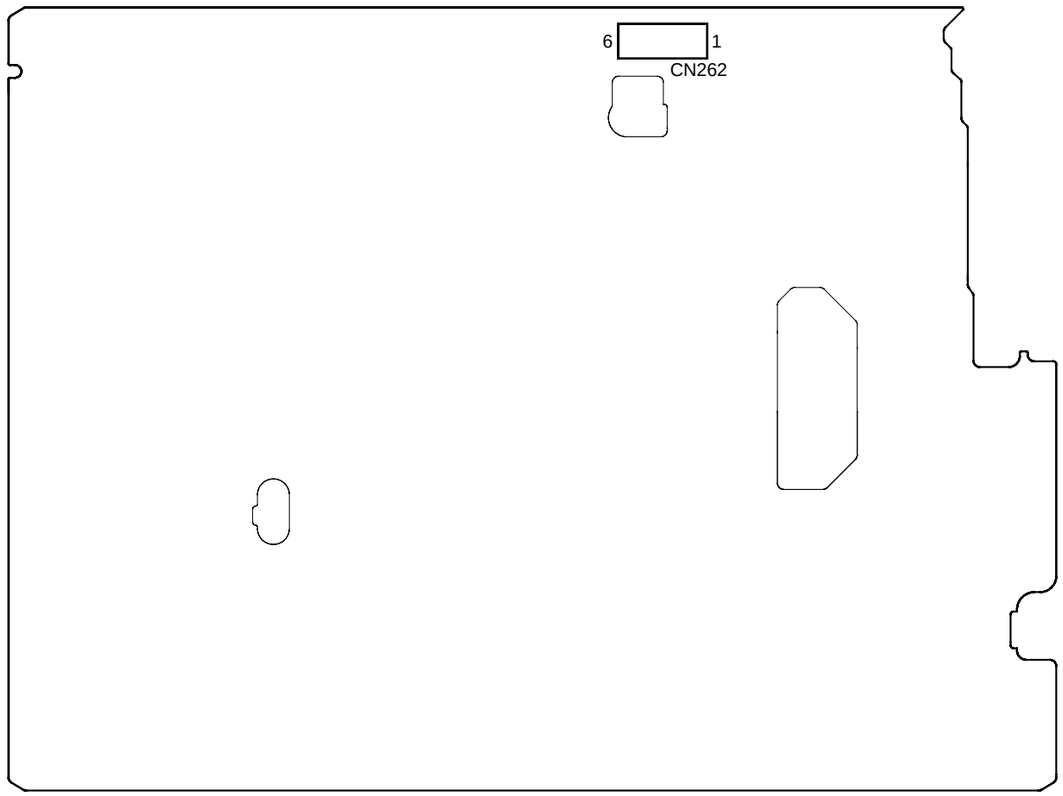
Purpose:
Confirm that the S/N is within the specification.

Mode	REC and PB (SP mode)
Signal	Short
Measurement point	Audio output terminal
Measurement equipment	Audio noise meter
Specified value	–45.5 dBs or less

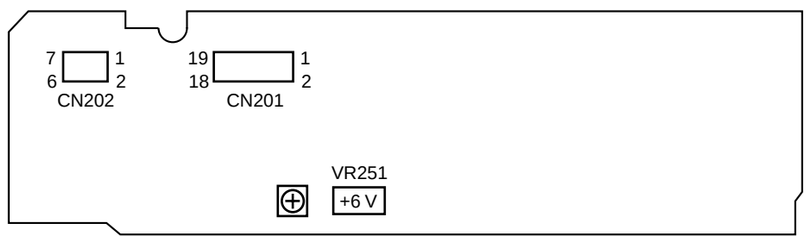
Confirmation Method:
1) Connect both L and R channels of audio line input to the GND.
2) Start recording.
3) Play the recorded part to confirm that the noise is below –45.5 dBs.

2-5. PARTS ARRANGEMENT DIAGRAM FOR ADJUSTMENTS

MA-400 BOARD (Side A)



SRV938EK BOARD (Side A)



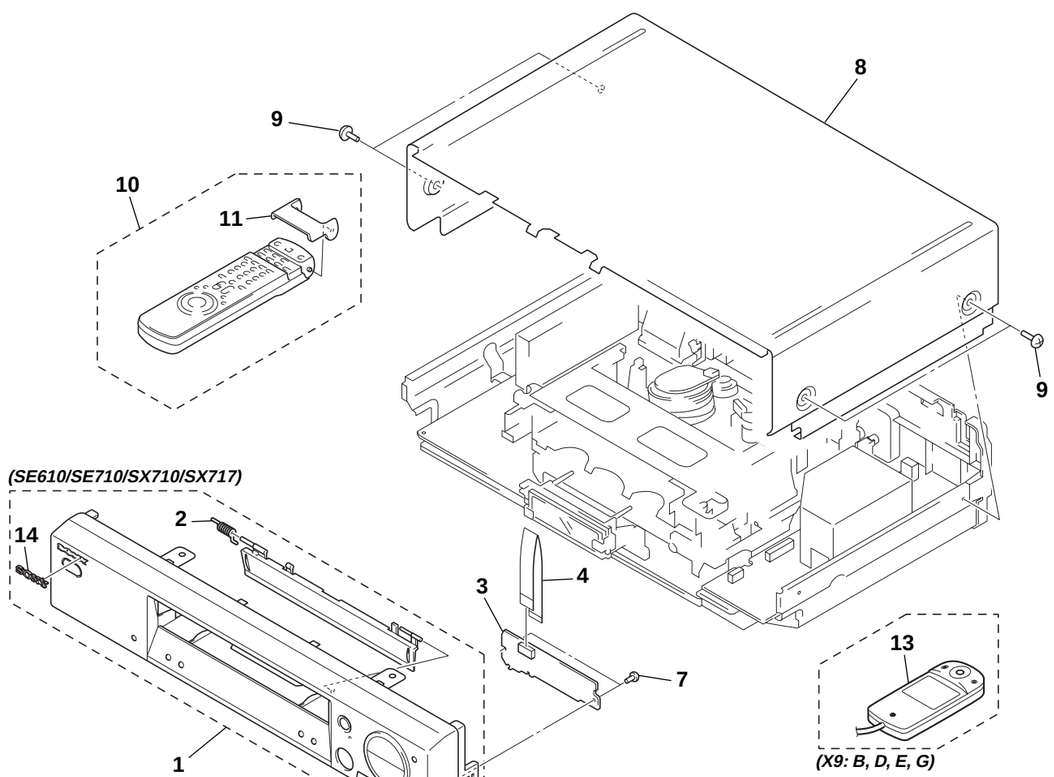
SECTION 8
REPAIR PARTS LIST

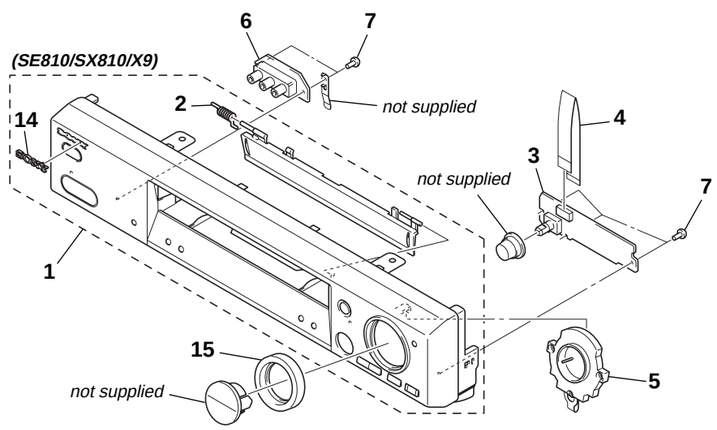
8-1. EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

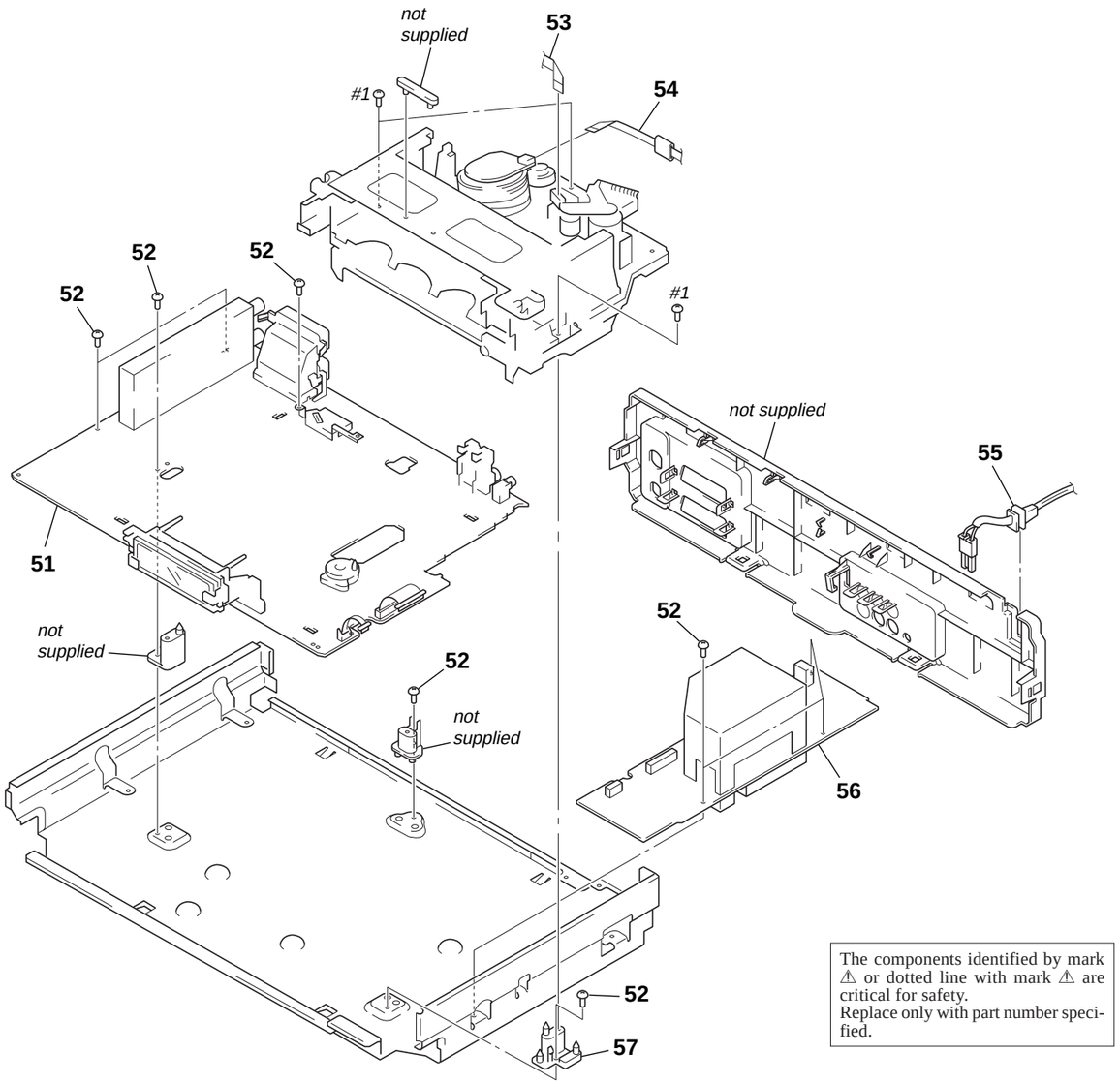
8-1-1. FRONT PANEL AND CABINET ASSEMBLIES





Ref. No.	Part No.	Description	Remark
1	X-3951-270-1	PANEL ASSY, FRONT (SE610: A, E, G, K, N)	
1	X-3951-271-1	PANEL ASSY, FRONT (SE610B)	
1	X-3951-272-1	PANEL ASSY, FRONT (SE710: D, E, K, N)	
1	X-3951-273-1	PANEL ASSY, FRONT (SE710B)	
1	X-3951-274-1	PANEL ASSY, FRONT (SE710: G, I)	
1	X-3951-275-1	PANEL ASSY, FRONT (SX710: D, E, K, N)	
1	X-3951-276-1	PANEL ASSY, FRONT (SX710B)	
1	X-3951-277-1	PANEL ASSY, FRONT (SX717)	
1	X-3951-278-1	PANEL ASSY, FRONT (SE810: D, E, K, N)	
1	X-3951-279-1	PANEL ASSY, FRONT (SE810B)	
1	X-3951-280-1	PANEL ASSY, FRONT (SE810G)	
1	X-3951-281-1	PANEL ASSY, FRONT (SX810)	
1	X-3951-757-1	PANEL ASSY, FRONT (X9: E, D)	
1	X-3951-759-1	PANEL ASSY, FRONT (X9B)	
1	X-3951-760-1	PANEL ASSY, FRONT (X9G)	
1	X-3951-761-1	PANEL ASSY, FRONT (X9N)	
2	3-953-432-01	SPRING (GE), FL	
* 3	A-6794-810-A	DS-95 BOARD, COMPLETE (SE610/SE710/SX710/SX717)	
* 3	A-6794-812-A	DS-95 BOARD, COMPLETE (SE810/SX810/X9)	
4	1-757-593-11	CABLE, FLAT (FDS-10) (SE610/SE710/SX710/SX717)	
4	1-757-594-11	CABLE, FLAT (FDS-9) (SE810/SX810/X9)	
5	1-762-844-31	SWITCH, ROTARY (SE810/SX810/X9)	
* 6	A-6794-811-A	JK-201 BOARD, COMPLETE (SE810/SX810/X9)	
7	4-921-277-41	SCREW (B2.6X8), TAPPING, BIND	
8	3-057-808-31	CASE, UPPER (SX710/SX717/SX810)	
8	3-057-808-51	CASE, UPPER (SE610/SE710/SE810/X9)	
9	3-363-099-01	SCREW (CASE 3 TP2) (SX710/SX717/SX810)	
9	3-363-099-11	SCREW (CASE 3 TP2) (SE610/SE710/SE810/X9)	
10	1-418-010-11	COMMANDER, STANDARD (RMT-V259) (SX717/SX810)	
10	1-418-010-31	COMMANDER, STANDARD (RMT-V259B) (X9N)	
10	1-418-780-11	COMMANDER, STANDARD (RMT-V288) (SX710: D, E, K, N)	
10	1-418-780-21	COMMANDER, STANDARD (RMT-V288A) (SX710B)	
10	1-418-782-11	COMMANDER, STANDARD (RMT-V259K) (SE810: D, E, G, K, N)	
10	1-418-782-21	COMMANDER, STANDARD (RMT-V259L) (SE810B)	
10	1-476-369-11	COMMANDER, STANDARD (RMT-V259R) (X9: D, E, G)	
10	1-476-370-11	COMMANDER, STANDARD (RMT-V259S) (X9B)	
10	1-476-406-11	COMMANDER, STANDARD (RMT-V288B) (SE610: A, E, G, K, N/SE710: D, E, G, I, K, N)	
10	1-476-406-21	COMMANDER, STANDARD (RMT-V288C) (SE610B/SE710B)	
11	3-709-430-01	COVER, REMOTE CONTROL (for RMT-V259/V288/V288A/V288B/V288C) (SE610/SE710/SX710/SX717/SX810)	
11	3-709-430-11	COVER, REMOTE CONTROL (for RMT-V259K/V259L) (SE810)	
13	1-476-070-11	CONTROLLER, STB/SAT (RMT-CM103) (X9: B, D, E)	
13	1-476-070-21	CONTROLLER, STB/SAT (RMT-CM103) (X9G)	
14	3-053-436-01	EMBLEM (NO.5), SONY (SX710/SX717/SX810)	
14	3-053-436-11	EMBLEM (NO.5), SONY (SE610/SE710/SE810)	
14	4-942-568-61	EMBLEM (NO.5), SONY (X9)	
15	3-057-801-11	RING (H), CHANGE SPEED (SX810)	
15	3-057-801-31	RING (H), CHANGE SPEED (SE810/X9)	

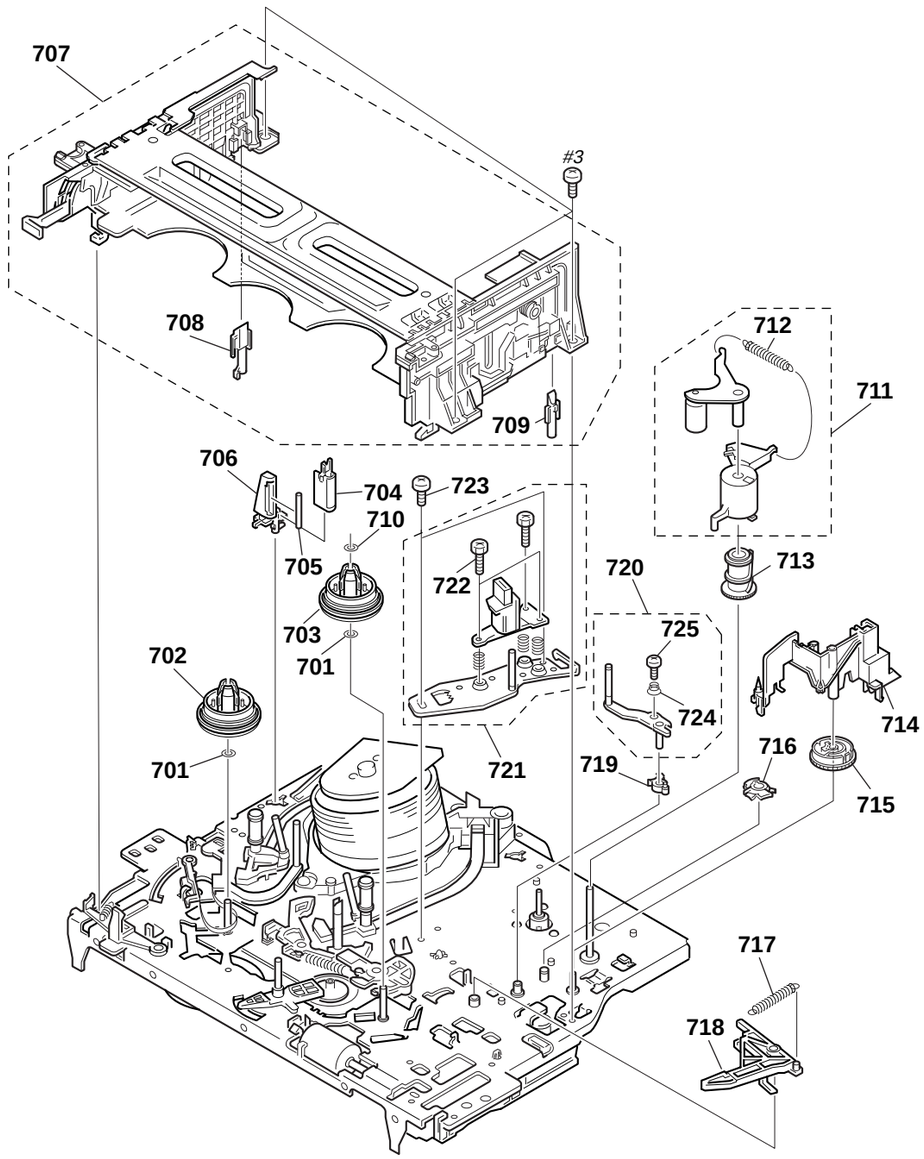
8-1-2. CHASSIS ASSEMBLY



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

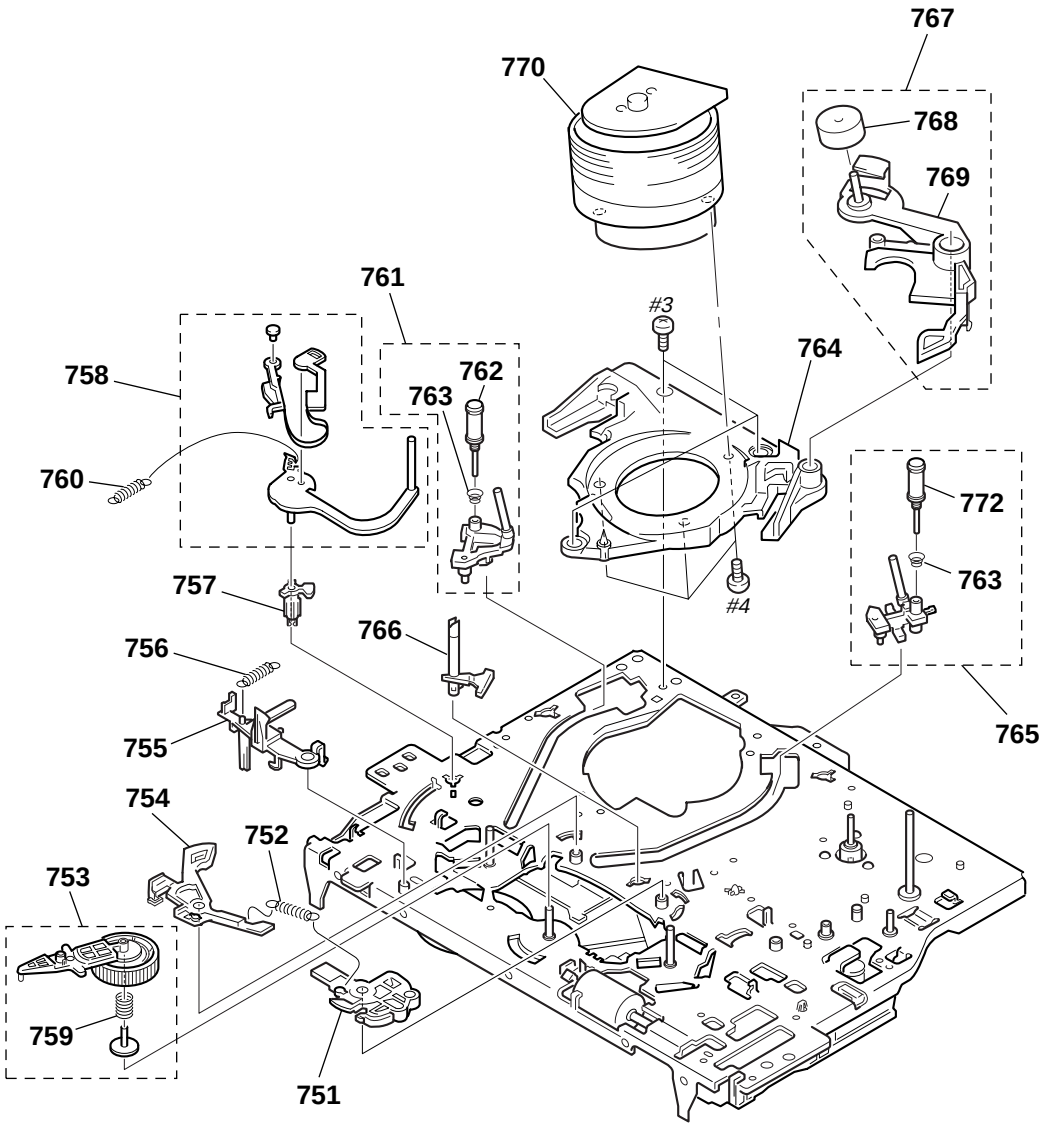
Ref. No.	Part No.	Description	Remark
* 51	A-6713-793-A	MA-400 BOARD, COMPLETE (SE710D/SX710D/SX717D)	
* 51	A-6713-794-A	MA-400 BOARD, COMPLETE (SE710B/SX710B)	
* 51	A-6713-795-A	MA-400 BOARD, COMPLETE (SE810B)	
* 51	A-6713-796-A	MA-400 BOARD, COMPLETE (SE810D/SX810)	
* 51	A-6713-797-A	MA-400 BOARD, COMPLETE (SE810G)	
* 51	A-6713-798-A	MA-400 BOARD, COMPLETE (SE710G)	
* 51	A-6713-799-A	MA-400 BOARD, COMPLETE (SE710E/SX710E/SX717E)	
* 51	A-6713-800-A	MA-400 BOARD, COMPLETE (SE710I)	
* 51	A-6713-801-A	MA-400 BOARD, COMPLETE (SE810E)	
* 51	A-6713-802-A	MA-400 BOARD, COMPLETE (SE610G)	
* 51	A-6713-803-A	MA-400 BOARD, COMPLETE (SE610A)	
* 51	A-6713-804-A	MA-400 BOARD, COMPLETE (SE610B)	
* 51	A-6713-805-A	MA-400 BOARD, COMPLETE (SE610E)	
* 51	A-6713-806-A	MA-400 BOARD, COMPLETE (X9G)	
* 51	A-6713-807-A	MA-400 BOARD, COMPLETE (X9D)	
* 51	A-6713-808-A	MA-400 BOARD, COMPLETE (X9B)	
* 51	A-6713-809-A	MA-400 BOARD, COMPLETE (X9E)	
* 51	A-6713-810-A	MA-400 BOARD, COMPLETE (SE810N/X9N)	
* 51	A-6713-811-A	MA-400 BOARD, COMPLETE (SE810K)	
* 51	A-6713-812-A	MA-400 BOARD, COMPLETE (SE710N/SX710N)	
* 51	A-6713-813-A	MA-400 BOARD, COMPLETE (SE710K/SX710K)	
* 51	A-6713-814-A	MA-400 BOARD, COMPLETE (SE610N)	
* 51	A-6713-815-A	MA-400 BOARD, COMPLETE (SE610K)	
52	3-970-608-21	SUMITITE (B3), +BV	
53	1-757-537-11	CABLE, FLAT (FAC-9)	
54	1-792-022-11	CABLE, FLAT (FFM-001)	
⚠55	1-782-012-11	CORD, POWER	
* 56	1-468-458-14	POWER BLOCK (SRV938EK)	
57	3-057-805-01	BASE, MD (R), KS	

8-1-3. MECHANISM CHASSIS ASSEMBLY (1)



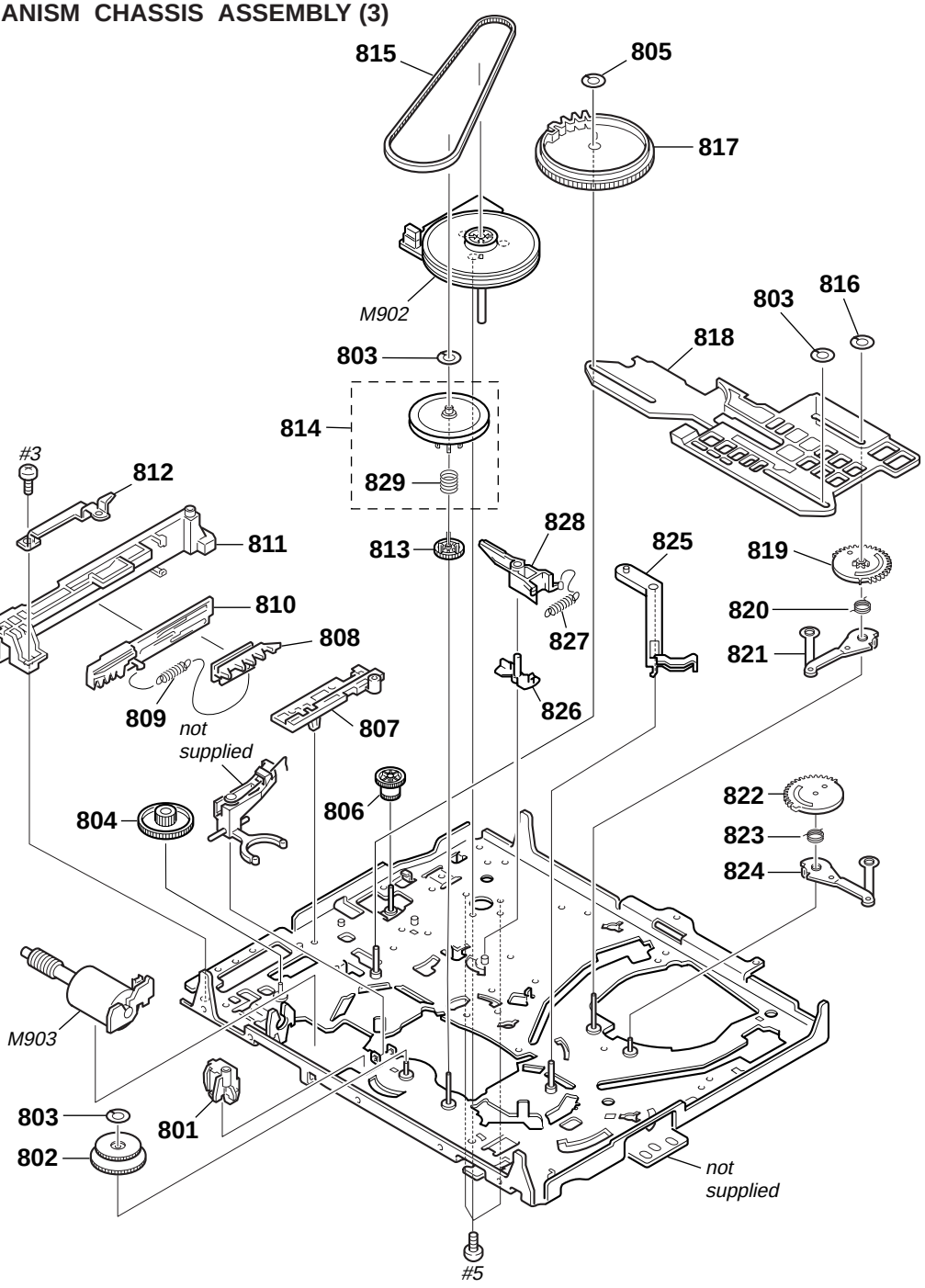
Ref. No.	Part No.	Description	Remark
701	3-977-509-01	WASHER, THRUST	
702	3-977-507-01	TABLE, REEL (S)	
703	3-977-508-01	TABLE, REEL (T)	
704	1-500-471-11	HEAD, FE	
705	3-977-495-01	SHAFT TG2	
706	3-977-494-01	HOLDER, FEH	
707	A-6776-359-C	FL COMPLETE ASSY (SL)	
708	3-977-535-01	PLATE, LUMINOUS (END SENSOR)	
709	3-977-536-01	PLATE, LUMINOUS (TOP SENSOR)	
710	3-977-443-01	WASHER, STOPPER	
711	A-6759-863-B	PRESS BLOCK ASSY, PINCH	
712	3-958-455-01	SPRING (PINCH), TENSION	
713	3-977-447-01	GEAR, ELEVATOR	
714	3-063-773-02	OPENER, LID (SL)	
715	3-977-441-03	GEAR, PINCH PRESSING	
716	3-977-445-02	GEAR, TG8 ARM DRIVING	
717	3-062-763-01	SPRING, EXTENSION (RVS BRAKE)	
718	X-3950-964-1	ARM ASSY, RVS BRAKE (SL)	
719	3-063-756-01	GEAR, TG8 ARM H/R	
720	X-3947-590-1	TG8 ASSY	
721	A-6775-791-A	ACE BLOCK ASSY (EURO 3)	
722	3-974-556-11	+ HEXA TT 2.6X9 (TAPER)	
723	3-979-508-01	SCREW +HEXA TP SW 3X8	
724	3-059-958-01	SPRING, TG 8	
725	3-051-300-03	LOCK ACE SCREW	

8-1-4. MECHANISM CHASSIS ASSEMBLY (2)



Ref. No.	Part No.	Description	Remark
751	X-3949-363-1	BRAKE ASSY, MAIN (T)	
752	3-053-882-01	SPRING, TENS (MAIN BRAKE)	
753	X-3947-573-1	ARM ASSY, PENDULUM	
754	X-3951-005-1	BRAKE ASSY, MAIN (S) (B) H/R	
755	3-063-772-01	LEVER, REC PROOF (SL)	
756	3-976-767-01	SPRING, TENS. (REC. PROOF)	
757	3-977-487-01	BOSS, TG1 FULCRUM	
758	X-3950-966-1	TG1 ASSY (SL)	
759	3-063-958-01	SPRING, COMP (SL PEND)	
760	3-977-488-01	SPRING (POWER TENSION)	
761	A-6775-463-A	SHUTTLE (S) BLOCK ASSY, ST	
762	X-3948-050-1	ROLLER ASSY, GUIDE	
763	3-965-178-01	SPRING	
764	3-062-687-01	BASE, DRUM, K (UPPER MOTOR)	
765	A-6750-328-E	SHUTTLE (T) BLOCK ASSY	
766	3-977-501-01	PLATE, LUMINOUS	
767	A-6746-074-G	ROLLER BLOCK ASSY, HC	
768	X-3947-255-1	ROLLER ASSY, HC	
769	3-975-724-07	ARM, HC	
770	1-772-364-11	DRUM ASSY, DZH-0B5A-R (EXCEPT SE610B/SE710B/SE810B/SX710B/X9B)	
770	1-772-365-11	DRUM ASSY, DZH-0B6A-R (SE610B/SE710B/SE810B/SX710B/X9B)	
772	X-3949-910-1	G. ROLLER ASSY	

8-1-5. MECHANISM CHASSIS ASSEMBLY (3)



Ref. No.	Part No.	Description	Remark
801	3-977-437-01	RETAINER, CAM MOTOR	
802	X-3949-364-1	ASSY, REEL DIRECT SELECT (B)	
803	3-977-443-01	WASHER, STOPPER	
804	3-063-760-01	WORM-WHEEL H/R	
805	3-056-952-11	WASHER, STOPPER	
806	3-977-444-01	GEAR, PINCH TRANSMISSION	
807	3-977-515-01	GUIDE, FL SLIDER	
808	3-977-517-01	PLATE, SLIDE, FL	
809	3-977-519-01	SPRING, TENS. (LIMIT, FL)	
810	3-977-518-02	PLATE, LIMITTER, FL	
811	3-977-516-01	HOLDER, FL SLIDER	
812	3-977-877-01	PLATE, RETAINER	
813	3-977-504-01	GEAR, CLUTCH	
814	X-3949-365-1	GEAR ASSY PULLEY (B)	
815	3-977-510-01	BELT, RUBBER	
816	3-056-824-01	WASHER, STOPPER	

Ref. No.	Part No.	Description	Remark
817	3-063-755-01	GEAR, CAM H/R	
818	3-063-768-01	SLIDER (SL)	
819	3-063-757-01	GEAR, LOADING (T) H/R	
820	3-977-456-03	SPRING, TORSION (LOAD T)	
821	X-3948-132-2	LEVER ASSY, LOADING (T)	
822	3-977-451-01	GEAR, LOADING (S)	
823	3-977-452-01	SPRING, TORSION (LOAD S)	
824	X-3948-131-1	LEVER ASSY, LOADING (S)	
825	3-977-489-01	ARM, TG1 DRIVING	
826	3-977-468-01	SHAFT, CAPSTAN BRAKE	
827	3-977-467-02	SPRING, CAP BRAKE	
828	X-3950-965-1	BRAKE ASSY, CAPSTAN (SL)	
829	3-063-823-01	SPRING, COMP (LIMITTER LOW K)	
M902	1-698-971-11	MOTOR, DC (CAPSTAN)	
M903	X-3947-577-1	MOTOR ASSY, CAM	

8-2. ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- Not all of the parts for POWER BLOCK (SRV938EK) are listed.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
*	A-6794-810-A	DS-95 BOARD, COMPLETE (SE610/SE710/SX710/SX717)	
*	A-6794-812-A	DS-95 BOARD, COMPLETE (SE810/SX810/X9)	
		********** (Ref.No. 1,000 Series)	
		< CONNECTOR >	
CN450	1-770-514-31	CONNECTOR, FFC/FPC 5P (SE810/SX810/X9)	
CN451	1-770-519-31	CONNECTOR, FFC/FPC 11P (SE810/SX810/X9)	
CN453	1-770-514-31	CONNECTOR, FFC/FPC 5P (SE610/SE710/SX710/SX717)	
		< DIODE >	
D450	8-719-056-06	DIODE SLR-342DCT31 (JOG) (SE810/SX810/X9)	
		< SHORT >	
JS450	1-216-295-11	SHORT 0 (SE610/SE710/SX710/SX717)	
		< TRANSISTOR >	
Q450	8-729-043-29	TRANSISTOR PDTC144EK-115 (SE810/SX810/X9)	
		< RESISTOR >	
R450	1-249-408-11	CARBON 180 5% 1/4W F (SE810/SX810/X9)	
R451	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R452	1-249-417-11	CARBON 1K 5% 1/4W F	
R453	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R454	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R455	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R456	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R457	1-249-417-11	CARBON 1K 5% 1/4W F	
R458	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
		< SWITCH >	
S410	1-418-156-11	ENCODER, ROTARYRY (DIAL TIMER) (SE810/SX810/X9)	
S450	1-786-097-21	SWITCH, TACT (●)	
S451	1-786-097-21	SWITCH, TACT (◀◀)	
S452	1-786-097-21	SWITCH, TACT (■) (SE610/SE710/SX710/SX717)	
S453	1-786-097-21	SWITCH, TACT (►) (SE610/SE710/SX710/SX717)	
S454	1-786-097-21	SWITCH, TACT (JOG) (SE810/SX810/X9)	
S455	1-786-097-21	SWITCH, TACT (▶▶)	
S456	1-786-097-21	SWITCH, TACT (❚❚)	
S457	1-786-097-21	SWITCH, TACT (⏏)	
*	A-6794-811-A	JK-201 BOARD, COMPLETE (SE810/SX810/X9)	
		********** (Ref.No. 1,000 Series)	
		< CAPACITOR >	
C481	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C491	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
C493	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
		< DIODE >	
D480	8-719-070-59	DIODE PDZ6.8B-115	
D481	8-719-067-40	DIODE STZ6.8N-T146	
D490	8-719-067-40	DIODE STZ6.8N-T146	
D491	8-719-067-40	DIODE STZ6.8N-T146	
		< JACK >	
J481	1-695-865-11	JACK, PIN 3P (LINE-2 IN)	
		< RESISTOR >	
R480	1-216-022-00	METAL CHIP 75 5% 1/10W	
R490	1-216-817-11	METAL CHIP 470 5% 1/16W	
R491	1-216-817-11	METAL CHIP 470 5% 1/16W	

MA-400

Ref. No.	Part No.	Description	Remark
*	A-6713-793-A	MA-400 BOARD, COMPLETE (SE710D/SX710D/SX717D)	
*	A-6713-794-A	MA-400 BOARD, COMPLETE (SE710B/SX710B)	
*	A-6713-795-A	MA-400 BOARD, COMPLETE (SE810B)	
*	A-6713-796-A	MA-400 BOARD, COMPLETE (SE810D/SX810)	
*	A-6713-797-A	MA-400 BOARD, COMPLETE (SE810G)	
*	A-6713-798-A	MA-400 BOARD, COMPLETE (SE710G)	
*	A-6713-799-A	MA-400 BOARD, COMPLETE (SE710E/SX710E/SX717E)	
*	A-6713-800-A	MA-400 BOARD, COMPLETE (SE710I)	
*	A-6713-801-A	MA-400 BOARD, COMPLETE (SE810E)	
*	A-6713-802-A	MA-400 BOARD, COMPLETE (SE610G)	
*	A-6713-803-A	MA-400 BOARD, COMPLETE (SE610A)	
*	A-6713-804-A	MA-400 BOARD, COMPLETE (SE610B)	
*	A-6713-805-A	MA-400 BOARD, COMPLETE (SE610E)	
*	A-6713-806-A	MA-400 BOARD, COMPLETE (X9G)	
*	A-6713-807-A	MA-400 BOARD, COMPLETE (X9D)	
*	A-6713-808-A	MA-400 BOARD, COMPLETE (X9B)	
*	A-6713-809-A	MA-400 BOARD, COMPLETE (X9E)	
*	A-6713-810-A	MA-400 BOARD, COMPLETE (SE810N/X9N)	
*	A-6713-811-A	MA-400 BOARD, COMPLETE (SE810K)	
*	A-6713-812-A	MA-400 BOARD, COMPLETE (SE710N/SX710N)	
*	A-6713-813-A	MA-400 BOARD, COMPLETE (SE710K/SX710K)	
*	A-6713-814-A	MA-400 BOARD, COMPLETE (SE610N)	
*	A-6713-815-A	MA-400 BOARD, COMPLETE (SE610K)	
		**********	
		(Ref.No. 1,000 Series)	
	3-057-806-01	BASE, FL	
	3-058-480-02	HOLDER, FLO	
	3-960-273-11	SPACER, TOP END	

< CAPACITOR >

C100	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C101	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C102	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C103	1-128-057-11	ELECT	330uF	20%	6.3V
C105	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C107	1-104-664-11	ELECT	47uF	20%	16V
C108	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C113	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C114	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C115	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C120	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C121	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C122	1-124-589-11	ELECT	47uF	20%	16V
C123	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C131	1-124-589-11	ELECT	47uF	20%	16V
C133	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C134	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C140	1-126-933-11	ELECT	100uF	20%	16V
C141	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C142	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C143	1-126-965-11	ELECT	22uF	20%	50V
C144	1-126-965-11	ELECT	22uF	20%	50V
C145	1-126-933-11	ELECT	100uF	20%	16V
C146	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C147	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (SE810/SX810/X9)
C160	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C161	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C162	1-104-905-11	CAPACITOR	0.22F		5.5V
C163	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C164	1-126-933-11	ELECT	100uF	20%	16V
C165	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C166	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C167	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C168	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C169	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C170	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C171	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C172	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C173	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C174	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C201	1-126-965-11	ELECT	22uF	20%	50V
C202	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C203	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C204	1-126-960-11	ELECT	1uF	20%	50V
C205	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C206	1-104-664-11	ELECT	47uF	20%	16V
C207	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (SE610B/SE710B/SE810B/SX710B/X9B)
C209	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C210	1-126-960-11	ELECT	1uF	20%	50V
C211	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C212	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C213	1-126-960-11	ELECT	1uF	20%	50V
C214	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C215	1-124-589-11	ELECT	47uF	20%	16V
C217	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C218	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C219	1-126-960-11	ELECT	1uF	20%	50V
C220	1-124-261-00	ELECT	10uF	20%	50V
C221	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C222	1-126-160-11	ELECT	1uF	20%	50V
C223	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C224	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C225	1-104-664-11	ELECT	47uF	20%	16V
C226	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C227	1-126-964-11	ELECT	10uF	20%	50V
C228	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C229	1-126-964-11	ELECT	10uF	20%	50V
C230	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C231	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C232	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C233	1-104-664-11	ELECT	47uF	20%	16V
C234	1-163-255-11	CERAMIC CHIP	150PF	5%	50V
C236	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C237	1-126-960-11	ELECT	1uF	20%	50V
C238	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C239	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C240	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C241	1-126-960-11	ELECT	1uF	20%	50V
C242	1-126-960-11	ELECT	1uF	20%	50V
C243	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (SE810/SX810/X9)
C244	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)

Ref. No.	Part No.	Description			Remark
C245	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C247	1-104-664-11	ELECT	47uF	20%	16V
C248	1-124-589-11	ELECT	47uF	20%	16V
C249	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C250	1-163-243-11	CERAMIC CHIP	47PF	5%	50V (SE810/SX810/X9)
C251	1-163-243-11	CERAMIC CHIP	47PF	5%	50V (SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)
C252	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C281	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C282	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C284	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C285	1-124-589-11	ELECT	47uF	20%	16V
C286	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C288	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C293	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C295	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C296	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C297	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C298	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C299	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C303	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C304	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C306	1-104-664-11	ELECT	47uF	20%	16V
C307	1-104-664-11	ELECT	47uF	20%	16V
C308	1-126-964-11	ELECT	10uF	20%	50V
C309	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C310	1-119-799-11	ELECT	47uF	20%	16V
C311	1-126-964-11	ELECT	10uF	20%	50V
C312	1-124-257-00	ELECT	2.2uF	20%	50V
C313	1-126-964-11	ELECT	10uF	20%	50V
C314	1-119-799-11	ELECT	47uF	20%	16V
C315	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C316	1-126-964-11	ELECT	10uF	20%	50V
C317	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C319	1-124-261-00	ELECT	10uF	20%	50V
C320	1-126-964-11	ELECT	10uF	20%	50V
C322	1-126-964-11	ELECT	10uF	20%	50V
C323	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C324	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C325	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C326	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C327	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C328	1-126-960-11	ELECT	1uF	20%	50V (SE810/SX810/X9)
C329	1-126-960-11	ELECT	1uF	20%	50V (SE810/SX810/X9)
C330	1-126-960-11	ELECT	1uF	20%	50V
C331	1-126-960-11	ELECT	1uF	20%	50V
C332	1-126-960-11	ELECT	1uF	20%	50V (SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)
C333	1-126-960-11	ELECT	1uF	20%	50V (SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)
C336	1-126-964-11	ELECT	10uF	20%	50V
C337	1-124-261-00	ELECT	10uF	20%	50V (SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)
C338	1-124-261-00	ELECT	10uF	20%	50V (SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)
C351	1-126-965-11	ELECT	22uF	20%	50V
C352	1-126-963-11	ELECT	4.7uF	20%	50V
C353	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C354	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C355	1-124-589-11	ELECT	47uF	20%	16V
C357	1-124-589-11	ELECT	47uF	20%	16V
C358	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C359	1-137-374-11	MYLAR	0.047uF	5%	50V (SE610/SE710/SX710/SX717)
C359	1-137-462-11	MYLAR	0.018uF	5%	100V (SE810/SX810/X9)
C361	1-126-163-11	ELECT	4.7uF	20%	50V
C362	1-128-131-11	ELECT	22uF	20%	50V
C363	1-124-242-00	ELECT	33uF	20%	25V
C365	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V
C366	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C367	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C368	1-126-964-11	ELECT	10uF	20%	50V
C369	1-126-960-11	ELECT	1uF	20%	50V
C370	1-124-589-11	ELECT	47uF	20%	16V
C374	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C375	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C390	1-137-397-11	MYLAR	0.047uF	5%	100V (SE810/SX810/X9)
C391	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (SE810/SX810/X9)
C392	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V (SE810/SX810/X9)
C393	1-126-933-11	ELECT	100uF	20%	16V (SE810/SX810/X9)
C394	1-163-251-11	CERAMIC CHIP	100PF	5%	50V (SE810/SX810/X9)
C395	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C420	1-124-589-11	ELECT	47uF	20%	16V
C423	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C424	1-124-261-00	ELECT	10uF	20%	50V
C427	1-124-635-00	ELECT	220uF	20%	6.3V
C500	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C501	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C502	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C503	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C510	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C511	1-104-664-11	ELECT	47uF	20%	16V
C512	1-104-664-11	ELECT	47uF	20%	16V
C513	1-126-935-11	ELECT	470uF	20%	6.3V
C514	1-163-239-11	CERAMIC CHIP	33PF	5%	50V (SE710/SE810/SX710/SX717/SX810/X9)
C515	1-163-239-11	CERAMIC CHIP	33PF	5%	50V (SE710/SE810/SX710/SX717/SX810/X9)
C516	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C570	1-163-131-00	CERAMIC CHIP	390PF	5%	50V (SE610: B, E/SE710/SE810/SX710/SX717/SX810/X9)
C571	1-163-131-00	CERAMIC CHIP	390PF	5%	50V (SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)
C572	1-163-131-00	CERAMIC CHIP	390PF	5%	50V (SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)

Ref. No.	Part No.	Description	Remark
C573	1-163-131-00	CERAMIC CHIP 390PF 5% 50V	(SE610: B, E/SE710: B, D, E, K, N/SE810: B, D, E, K, N/SX710/SX717/SX810/X9: B, D, E, N)
C580	1-127-876-21	CERAMIC 0.01uF 10% 50V	
C611	1-104-664-11	ELECT 47uF 20% 25V	
C612	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C613	1-126-933-11	ELECT 100uF 20% 16V	
C618	1-126-965-11	ELECT 22uF 20% 50V	
C621	1-124-635-00	ELECT 220uF 20% 6.3V	(SE610: B, E/SE710/SE810/SX710/SX717/SX810/X9)
C660	1-163-231-11	CERAMIC CHIP 15PF 5% 50V	
C661	1-163-231-11	CERAMIC CHIP 15PF 5% 50V	
C662	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	
C663	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C664	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C665	1-163-245-11	CERAMIC CHIP 56PF 5% 50V	(SE610: B, K, N/SE710: B, K, N/SE810: B, K, N/SX710: B, K, N/X9: B, N)
C666	1-163-135-00	CERAMIC CHIP 560PF 5% 50V	
C667	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C668	1-125-972-91	ELECT 100uF 20% 16V	
C669	1-163-016-00	CERAMIC CHIP 0.0039uF 10% 50V	
C670	1-109-982-11	CERAMIC CHIP 1uF 10% 10V	
C671	1-163-235-11	CERAMIC CHIP 22PF 5% 50V	
C672	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C701	1-126-964-11	ELECT 10uF 20% 50V	
C702	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	
C704	1-126-964-11	ELECT 10uF 20% 50V	
C705	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C708	1-104-664-11	ELECT 47uF 20% 16V	
C709	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C710	1-126-965-11	ELECT 22uF 20% 50V	
C711	1-104-664-11	ELECT 47uF 20% 16V	
C712	1-163-241-11	CERAMIC CHIP 39PF 5% 50V	
C713	1-163-241-11	CERAMIC CHIP 39PF 5% 50V	
C714	1-104-664-11	ELECT 47uF 20% 16V	
C720	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C730	1-126-964-11	ELECT 10uF 20% 50V	
C731	1-126-964-11	ELECT 10uF 20% 50V	
C752	1-126-933-11	ELECT 100uF 20% 16V	
C753	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C754	1-126-935-11	ELECT 470uF 20% 6.3V	
C755	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C757	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C801	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C850	1-163-038-11	CERAMIC CHIP 0.1uF 25V	
C851	1-126-964-11	ELECT 10uF 20% 50V	(SE710/SE810/SX710/SX717/SX810/X9)
C852	1-164-161-11	CERAMIC CHIP 0.0022uF 10% 100V	(SE710/SE810/SX710/SX717/SX810/X9)
C853	1-163-989-11	CERAMIC CHIP 0.033uF 10% 25V	(SE710/SE810/SX710/SX717/SX810/X9)
C855	1-164-489-11	CERAMIC CHIP 0.22uF 10% 16V	(SE710/SE810/SX710/SX717/SX810/X9)
C856	1-163-038-11	CERAMIC CHIP 0.1uF 25V	(SE710/SE810/SX710/SX717/SX810/X9)
C871	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C872	1-104-664-11	ELECT 47uF 20% 16V	(X9: B, D, E, G)
C873	1-163-038-11	CERAMIC CHIP 0.1uF 25V	(X9: B, D, E, G)
C874	1-163-038-11	CERAMIC CHIP 0.1uF 25V	(X9: B, D, E, G)
C875	1-126-935-11	ELECT 470uF 20% 6.3V	(X9: B, D, E, G)
C970	1-163-259-91	CERAMIC CHIP 220PF 5% 50V	(SE610B/SE710B/SE810B/SX710B/X9B)
C971	1-124-257-00	ELECT 2.2uF 20% 50V	(SE610B/SE710B/SE810B/SX710B/X9B)
C972	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	(SE610B/SE710B/SE810B/SX710B/X9B)
C973	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	(SE610B/SE710B/SE810B/SX710B/X9B)
C974	1-126-160-11	ELECT 1uF 20% 50V	(SE610B/SE710B/SE810B/SX710B/X9B)
C975	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	(SE610B/SE710B/SE810B/SX710B/X9B)
C976	1-163-259-91	CERAMIC CHIP 220PF 5% 50V	(SE610B/SE710B/SE810B/SX710B/X9B)
C977	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	(SE610B/SE710B/SE810B/SX710B/X9B)
C978	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	(SE610B/SE710B/SE810B/SX710B/X9B)
C979	1-163-255-11	CERAMIC CHIP 150PF 5% 50V	(SE610B/SE710B/SE810B/SX710B/X9B)
C980	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	(SE610B/SE710B/SE810B/SX710B/X9B)
C981	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	(SE610B/SE710B/SE810B/SX710B/X9B)
C982	1-163-007-11	CERAMIC CHIP 680PF 10% 50V	(SE610B/SE710B/SE810B/SX710B/X9B)
C983	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	(SE610B/SE710B/SE810B/SX710B/X9B)
C984	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	(SE610B/SE710B/SE810B/SX710B/X9B)
C985	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	(SE610B/SE710B/SE810B/SX710B/X9B)
C986	1-124-261-00	ELECT 10uF 20% 50V	(SE610B/SE710B/SE810B/SX710B/X9B)
C987	1-124-465-00	ELECT 0.47uF 20% 50V	(SE610B/SE710B/SE810B/SX710B/X9B)
C988	1-163-251-11	CERAMIC CHIP 100PF 5% 50V	(SE610B/SE710B/SE810B/SX710B/X9B)
C991	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	(SE610B/SE710B/SE810B/SX710B/X9B)
C992	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	(SE610B/SE710B/SE810B/SX710B/X9B)
C993	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	(SE610B/SE710B/SE810B/SX710B/X9B)
C994	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	(SE610B/SE710B/SE810B/SX710B/X9B)
C995	1-125-972-91	ELECT 100uF 20% 16V	(SE610B/SE710B/SE810B/SX710B/X9B)
C996	1-163-227-11	CERAMIC CHIP 10PF 0.5PF 50V	(SE610B/SE710B/SE810B/SX710B/X9B)
		< CONNECTOR >	
CN101	1-784-484-11	CONNECTOR, FFC/FPC 5P	
CN102	1-779-723-11	CONNECTOR, BOARD TO BOARD 9P	
* CN104	1-766-716-11	CONNECTOR, BOARD TO BOARD 3P	
* CN161	1-506-469-11	PIN, CONNECTOR 4P	
CN260	1-784-490-11	CONNECTOR, FFC/FPC 11P	
* CN262	1-560-894-00	PIN, CONNECTOR 6P	
CN350	1-784-486-11	CONNECTOR, FFC/FPC 7P	
CN460	1-784-490-11	CONNECTOR, FFC/FPC 11P (SE810/SX810/X9)	

Ref. No.	Part No.	Description	Remark
CN461	1-784-484-11	CONNECTOR, FFC/FPC 5P (SE610/SE710/SX710/SX717)	
CN500	1-793-918-11	CONNECTOR, SQUARE TYPE 21P (LINE-1 (TV)) (SE610: A, G, K, N)	
* CN501	1-568-954-11	PIN, CONNECTOR 5P (SE810/SX810/X9)	
CN570	1-793-917-11	CONNECTOR, SQUARE TYPE 21P (LINE-1 (TV), DECODER/LINE-2 IN) (SE610: B, E/SE710/SX710/SX717)	
CN570	1-793-917-11	CONNECTOR, SQUARE TYPE 21P (LINE-1 (TV), DECODER/LINE-3 IN) (SE810/SX810/X9)	
CN600	1-778-674-21	CONNECTOR, BOARD TO BOARD 19P	
CN601	1-793-673-11	CONNECTOR, BOARD TO BOARD 7P	
		< DIODE >	
D100	8-719-048-26	DIODE GL528V1 (T/S LED)	
D110	8-719-200-82	DIODE MPG06D-6052PKG3	
D424	8-719-067-40	DIODE STZ6.8N-T146	
D500	8-719-071-50	DIODE BZA408B-115	
D501	8-719-071-50	DIODE BZA408B-115	
D502	8-719-070-59	DIODE PDZ6.8B-115	
D503	8-719-977-40	DIODE UDZ-TE-17-13B	
D504	8-719-070-59	DIODE PDZ6.8B-115	
D570	8-719-071-50	DIODE BZA408B-115 (SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)	
D571	8-719-070-59	DIODE PDZ6.8B-115 (SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)	
D572	8-719-977-40	DIODE UDZ-TE-17-13B (SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)	
D573	8-719-070-59	DIODE PDZ6.8B-115	
D590	8-719-911-19	DIODE 1SS119-25TD	
D603	8-719-200-82	DIODE MPG06D-6052PKG3 (SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)	
D606	8-719-200-82	DIODE MPG06D-6052PKG3	
D607	8-719-200-82	DIODE MPG06D-6052PKG3	
D702	8-719-982-26	DIODE MTZJ-T-77-33	
D720	8-719-911-19	DIODE 1SS119-25TD	
D721	8-719-911-19	DIODE 1SS119-25TD	
D750	8-719-200-82	DIODE MPG06D-6052PKG3	
D800	8-719-911-19	DIODE 1SS119-25TD (SE710/SE810/SX710/SX717/SX810/X9)	
D871	8-719-070-59	DIODE PDZ6.8B-115 (X9)	
D872	8-719-070-59	DIODE PDZ6.8B-115 (X9)	
D873	8-719-070-59	DIODE PDZ6.8B-115 (X9)	
		< IC >	
IC130	8-759-645-07	IC LB1943N	
IC160	8-759-248-87	IC MM1256XF-BE	
IC161	8-759-682-41	IC M24C32-WMN6T (A) (X9: B, D, E, G)	
IC161	8-759-714-06	IC M24C16-WMN6T (A) (SE610/SE710/SE810/SX710/ SX717/SX810/X9N)	
IC162	8-759-694-68	IC M37970MGA-051GP (SE610)	
IC162	8-759-694-69	IC M37970MGA-050GP (SE710/SE810/SX710/SX717/SX810/X9)	
IC201	8-759-699-51	IC LA71710M-MPB-E	
IC301	8-759-638-55	IC TDA9605H/N2, 518	

Ref. No.	Part No.	Description	Remark
IC351	8-759-499-30	IC BA7755AF-E2	
IC420	8-759-643-83	IC uPD16315GB-3BS	
IC460	8-759-830-96	IC SFH5110-40	
⚠IC601	8-759-438-18	IC PQ12RD08	
IC850	8-759-484-61	IC SDA5650X-GEG (SE710/SE810/SX710/SX717/SX810/X9)	
IC970	8-759-438-17	IC LA7337 (SE610B/SE710B/SE810B/SX710B/X9B)	
		< JACK >	
J500	1-784-414-11	JACK, PIN 2P (LINE-2 OUT) (SE710/SE810/SX710/SX717/SX810/X9)	
J871	1-779-013-11	JACK, MINIATURE (STB CONTROL) (X9: B, D, E, G)	
		< JUMPER RESISTOR >	
JR001	1-216-295-11	SHORT 0	
JR003	1-216-295-11	SHORT 0	
JR004	1-216-295-11	SHORT 0	
JR006	1-216-295-11	SHORT 0	
JR007	1-216-295-11	SHORT 0	
JR008	1-216-295-11	SHORT 0	
JR009	1-216-295-11	SHORT 0	
JR010	1-216-295-11	SHORT 0	
JR011	1-216-295-11	SHORT 0	
JR012	1-216-295-11	SHORT 0	
JR013	1-216-295-11	SHORT 0	
JR014	1-216-295-11	SHORT 0	
JR015	1-216-295-11	SHORT 0	
JR016	1-216-295-11	SHORT 0	
JR017	1-216-295-11	SHORT 0	
JR018	1-216-295-11	SHORT 0	
JR019	1-216-295-11	SHORT 0	
JR020	1-216-295-11	SHORT 0	
JR021	1-216-295-11	SHORT 0	
JR022	1-216-295-11	SHORT 0	
JR201	1-216-296-11	SHORT 0	
JR202	1-216-296-11	SHORT 0	
JR203	1-216-296-11	SHORT 0	
JR204	1-216-296-11	SHORT 0	
JR205	1-216-296-11	SHORT 0	
JR206	1-216-296-11	SHORT 0	
JR207	1-216-296-11	SHORT 0	
JR208	1-216-296-11	SHORT 0	
JR209	1-216-296-11	SHORT 0	
JR210	1-216-296-11	SHORT 0	
JR211	1-216-296-11	SHORT 0	
JR212	1-216-296-11	SHORT 0	
JR213	1-216-296-11	SHORT 0	
JR214	1-216-296-11	SHORT 0	
JR215	1-216-296-11	SHORT 0	
JR216	1-216-296-11	SHORT 0	
JR217	1-216-296-11	SHORT 0	
JR219	1-216-296-11	SHORT 0	
JR220	1-216-296-11	SHORT 0	
JR221	1-216-296-11	SHORT 0	
JR222	1-216-296-11	SHORT 0	
JR223	1-216-296-11	SHORT 0	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description		Remark
JR224	1-216-296-11	SHORT	0	
JR225	1-216-296-11	SHORT	0	
JR226	1-216-296-11	SHORT	0	
JR227	1-216-296-11	SHORT	0	
JR228	1-216-296-11	SHORT	0	
JR229	1-216-296-11	SHORT	0	
JR230	1-216-296-11	SHORT	0	
JR231	1-216-296-11	SHORT	0	
JR232	1-216-296-11	SHORT	0	
JR233	1-216-296-11	SHORT	0	
JR234	1-216-296-11	SHORT	0	
JR235	1-216-296-11	SHORT	0	
JR236	1-216-296-11	SHORT	0	
JR238	1-216-296-11	SHORT	0	
JR239	1-216-296-11	SHORT	0	
JR240	1-216-296-11	SHORT	0	
JR241	1-216-296-11	SHORT	0	
JR242	1-216-296-11	SHORT	0	
JR243	1-216-296-11	SHORT	0	
JR244	1-216-296-11	SHORT	0	
JR245	1-216-296-11	SHORT	0	
JR246	1-216-296-11	SHORT	0	
JR247	1-216-296-11	SHORT	0	
JR248	1-216-296-11	SHORT	0	
JR249	1-216-296-11	SHORT	0	
JR251	1-216-296-11	SHORT	0	
JR252	1-216-296-11	SHORT	0	
JR253	1-216-296-11	SHORT	0	
JR254	1-216-296-11	SHORT	0	
JR255	1-216-296-11	SHORT	0	
JR256	1-216-296-11	SHORT	0	
JR257	1-216-296-11	SHORT	0	
JR258	1-216-296-11	SHORT	0	
JR259	1-216-296-11	SHORT	0	
JR260	1-216-295-11	SHORT	0	
JR261	1-216-296-11	SHORT	0	
JR262	1-216-296-11	SHORT	0	
JR263	1-216-295-11	SHORT	0	
JR264	1-216-296-11	SHORT	0	
JR265	1-216-296-11	SHORT	0	
JR266	1-216-296-11	SHORT	0	
JS351	1-216-295-11	SHORT	0 (SE810/SX810/X9)	
JS591	1-216-295-11	SHORT	0	
		< COIL >		
L140	1-414-936-21	INDUCTOR	22uH	
L160	1-414-936-21	INDUCTOR	22uH	
L161	1-414-936-21	INDUCTOR	22uH	
L201	1-414-934-21	INDUCTOR	10uH	
L202	1-414-934-21	INDUCTOR	10uH	
L203	1-414-934-21	INDUCTOR	10uH	
L204	1-414-934-21	INDUCTOR	10uH	
L205	1-414-940-21	INDUCTOR	100uH	
L251	1-414-479-11	INDUCTOR	47nH	
L252	1-414-479-11	INDUCTOR	47nH	
L253	1-414-479-11	INDUCTOR	47nH (SE810/SX810/X9)	
L254	1-414-479-11	INDUCTOR	47nH (SE610: B, E/SE710/SE810/SX710/SX717/SX810/X9)	
L255	1-414-479-11	INDUCTOR	47nH	
L281	1-414-940-21	INDUCTOR	100uH	
L301	1-414-940-21	INDUCTOR	100uH	
L351	1-414-940-21	INDUCTOR	100uH	
L352	1-414-940-21	INDUCTOR	100uH	
L353	1-216-295-11	SHORT	0	
L355	1-216-295-11	SHORT	0	
L356	1-216-295-11	SHORT	0	
L357	1-216-295-11	SHORT	0	
L358	1-216-295-11	SHORT	0	
L359	1-216-295-11	SHORT	0	
L360	1-216-295-11	SHORT	0	
L361	1-216-295-11	SHORT	0	
L362	1-216-295-11	SHORT	0	
L390	1-410-687-11	INDUCTOR	1.2mH (SE810/SX810/X9)	
L460	1-414-938-21	INDUCTOR	47uH	
L510	1-414-940-21	INDUCTOR	100uH	
L660	1-414-930-21	INDUCTOR	2.2uH	
L661	1-414-936-21	INDUCTOR	22uH (SE610: B, K, N/SE710: B, K, N/SE810: B, K, N/SX710: B, K, N/X9: B, N)	
L662	1-414-936-21	INDUCTOR	22uH	
L663	1-414-936-21	INDUCTOR	22uH	
L701	1-414-930-21	INDUCTOR	2.2uH	
L750	1-414-930-21	INDUCTOR	2.2uH	
L751	1-414-934-21	INDUCTOR	10uH	
L871	1-414-934-21	INDUCTOR	10uH (X9: B, D, E, G)	
L970	1-414-933-21	INDUCTOR	6.8uH (SE610B/SE710B/SE810B/SX710B/X9B)	
L971	1-414-945-21	INDUCTOR	27uH (SE610B/SE710B/SE810B/SX710B/X9B)	
L972	1-414-938-21	INDUCTOR	47uH (SE610B/SE710B/SE810B/SX710B/X9B)	
L973	1-414-938-21	INDUCTOR	47uH (SE610B/SE710B/SE810B/SX710B/X9B)	
L975	1-414-934-21	INDUCTOR	10uH (SE610B/SE710B/SE810B/SX710B/X9B)	
		< FLUORESCENT INDICATOR >		
ND420	1-518-741-11	TUBE, FLUORESCENT INDICATOR		
		< PHOTO INTERRUPTER >		
PH100	8-749-015-86	PHOTO INTERRUPTER	GP3S120S	
PH101	8-749-015-86	PHOTO INTERRUPTER	GP3S120S	
		< IC LINK >		
⚠PS120	1-532-605-00	LINK, IC (0.4A)		
⚠PS390	1-532-727-11	LINK, IC (0.25A) (SE810/SX810/X9)		
⚠PS602	1-532-727-11	LINK, IC (0.25A) (SE610: B, E/SE710/SE810/SX710/SX717/SX810/X9)		
		< TRANSISTOR >		
Q100	8-729-043-84	TRANSISTOR	PT380F3	
Q101	8-729-043-84	TRANSISTOR	PT380F3	
Q102	8-729-281-53	TRANSISTOR	2SC1815GR-TPE2	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
Q140	8-729-422-33	TRANSISTOR 2PD601AR-115	(SE810/SX810/X9)
Q201	8-729-422-33	TRANSISTOR 2PD601AR-115	(SE610B/SE710B/SE810B/SX710B/X9B)
Q202	8-729-216-22	TRANSISTOR 2PB709AR-115	
Q351	8-729-821-15	TRANSISTOR 2SD1620-TD	
Q352	8-729-281-53	TRANSISTOR 2SC1815GR-TPE2	
Q390	8-729-900-51	TRANSISTOR UN2115-QRS (TX)	(SE810/SX810/X9)
Q391	8-729-043-29	TRANSISTOR PDTC144EK-115	(SE810/SX810/X9)
Q392	8-729-012-31	TRANSISTOR 2SC4040-TL2-Q	(SE810/SX810/X9)
Q501	8-729-043-32	TRANSISTOR PDTA114EK-115	
Q502	8-729-043-29	TRANSISTOR PDTC144EK-115	
Q510	8-729-216-22	TRANSISTOR 2PB709AR-115	
Q540	8-729-216-22	TRANSISTOR 2PB709AR-115	(SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N /SX710/SX717/SX810/X9: B, D, E, N)
Q541	8-729-216-22	TRANSISTOR 2PB709AR-115	(SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N/SX710/SX717/ SX810/X9: B, D, E, N)
Q590	8-729-422-33	TRANSISTOR 2PD601AR-115	
Q591	8-729-422-33	TRANSISTOR 2PD601AR-115	
Q592	8-729-216-22	TRANSISTOR 2PB709AR-115	
Q607	8-729-804-41	TRANSISTOR 2SB1122-ST-TD	(SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)
Q608	8-729-043-29	TRANSISTOR PDTC144EK-115	(SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)
Q612	8-729-804-41	TRANSISTOR 2SB1122-ST-TD	
Q613	8-729-043-29	TRANSISTOR PDTC144EK-115	
Q660	8-729-216-22	TRANSISTOR 2PB709AR-115	
Q661	8-729-216-22	TRANSISTOR 2PB709AR-115	
Q720	8-729-119-76	TRANSISTOR 2SA1309A-QRSTA	
Q721	8-729-043-29	TRANSISTOR PDTC144EK-115	
Q751	8-729-043-29	TRANSISTOR PDTC144EK-115	
Q752	8-729-216-22	TRANSISTOR 2PB709AR-115	
Q800	8-729-216-22	TRANSISTOR 2PB709AR-115	(SE710/SE810/SX710/SX717/SX810/X9)
Q801	8-729-422-33	TRANSISTOR 2PD601AR-115	(SE710/SE810/SX710/SX717/SX810/X9)
Q802	8-729-422-33	TRANSISTOR 2PD601AR-115	(SE710/SE810/SX710/SX717/SX810/X9)
Q803	8-729-422-33	TRANSISTOR 2PD601AR-115	(SE710/SE810/SX710/SX717/SX810/X9)
Q804	8-729-043-29	TRANSISTOR PDTC144EK-115	(SE710/SE810/SX710/SX717/SX810/X9)
Q850	8-729-216-22	TRANSISTOR 2PB709AR-115	(SE710/SE810/SX710/SX717/SX810/X9)
Q871	8-729-422-33	TRANSISTOR 2PD601AR-115	(X9: B, D, E, G)
Q872	8-729-140-75	TRANSISTOR 2SD999-T1CL	(X9: B, D, E, G)
Q873	8-729-422-33	TRANSISTOR 2PD601AR-115	(X9: B, D, E, G)
Q970	8-729-216-22	TRANSISTOR 2PB709AR-115	(SE610B/SE710B/SE810B/SX710B/X9B)
Q972	8-729-043-32	TRANSISTOR PDTA114EK-115	(SE610B/SE710B/SE810B/SX710B/X9B)
Q973	8-729-422-33	TRANSISTOR 2PD601AR-115	(SE610B/SE710B/SE810B/SX710B/X9B)
Q974	8-729-422-33	TRANSISTOR 2PD601AR-115	(SE610B/SE710B/SE810B/SX710B/X9B)
Q975	8-729-043-32	TRANSISTOR PDTA114EK-115	(SE610B/SE710B/SE810B/SX710B/X9B)
Q976	8-729-043-29	TRANSISTOR PDTC144EK-115	(SE610B/SE710B/SE810B/SX710B/X9B)
Q977	8-729-043-29	TRANSISTOR PDTC144EK-115	(SE610B/SE710B/SE810B/SX710B/X9B)

< RESISTOR >

Ref. No.	Part No.	Description			Remark
R100	1-216-077-91	RES-CHIP	15K	5%	1/10W
R101	1-249-413-11	CARBON	470	5%	1/4W F
R102	1-216-077-91	RES-CHIP	15K	5%	1/10W
R103	1-216-081-00	METAL CHIP	22K	5%	1/10W
R104	1-216-821-11	METAL CHIP	1K	5%	1/16W
R105	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R106	1-249-400-11	CARBON	39	5%	1/4W F
R107	1-249-400-11	CARBON	39	5%	1/4W F
R108	1-216-081-00	METAL CHIP	22K	5%	1/10W
R114	1-216-089-11	RES-CHIP	47K	5%	1/10W
R115	1-216-089-11	RES-CHIP	47K	5%	1/10W
R120	1-216-089-11	RES-CHIP	47K	5%	1/10W
R121	1-216-089-11	RES-CHIP	47K	5%	1/10W
R123	1-249-425-11	CARBON	4.7K	5%	1/4W F
R124	1-249-413-11	CARBON	470	5%	1/4W F
R130	1-216-077-91	RES-CHIP	15K	5%	1/10W
R132	1-216-817-11	METAL CHIP	470	5%	1/16W
R133	1-216-089-11	RES-CHIP	47K	5%	1/10W
R140	1-216-833-11	METAL CHIP	10K	5%	1/16W (SE810/SX810/X9)
R141	1-216-833-11	METAL CHIP	10K	5%	1/16W (SE810/SX810/X9)
R142	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R143	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R145	1-216-295-11	SHORT	0		
R146	1-216-295-11	SHORT	0		
R160	1-216-053-00	METAL CHIP	1.5K	5%	1/10W (SE610G/SE710: G, I/SE810G/X9G)
R160	1-216-061-00	METAL CHIP	3.3K	5%	1/10W (SE610B/SE710B/SE810B/SX710B/X9B)
R160	1-216-067-00	METAL CHIP	5.6K	5%	1/10W (SE610: K, N/SE710: K, N/SE810: K, N/SX710: K, N/X9N)
R160	1-216-295-11	SHORT	0		(SE610: A, E/SE710: D, E/SE810: D, E/ SX710: D, E/SX717/SX810/X9: D, E)
R161	1-216-053-00	METAL CHIP	1.5K	5%	1/10W (SE610E/SE710: B, G/SX710B)
R161	1-216-061-00	METAL CHIP	3.3K	5%	1/10W (SE610N/SE710: E, I/SE810B/SX710E/SX717E)
R161	1-216-067-00	METAL CHIP	5.6K	5%	1/10W (SE710N/SE810: E, G/SX710N/X9B)
R161	1-216-071-00	METAL CHIP	8.2K	5%	1/10W (SE710: D, K/SX710: D, K/SX717D)
R161	1-216-075-00	METAL CHIP	12K	5%	1/10W (SE810: D, N/SX810/X9: G, N)
R161	1-216-079-00	METAL CHIP	18K	5%	1/10W (SE810K/X9D)
R161	1-216-085-00	METAL CHIP	33K	5%	1/10W (SE610K/X9E)
R161	1-216-295-11	SHORT	0 (SE610: A, B, G)		
R162	1-249-429-11	CARBON	10K	5%	1/4W
R163	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R164	1-216-833-11	METAL CHIP	10K	5%	1/16W
R165	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R166	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R167	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R168	1-216-101-00	METAL CHIP	150K	5%	1/10W
R169	1-216-113-00	METAL CHIP	470K	5%	1/10W
R170	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R171	1-249-429-11	CARBON	10K	5%	1/4W
R172	1-216-295-11	SHORT	0		
R175	1-216-295-11	SHORT	0		
R176	1-216-025-11	RES-CHIP	100	5%	1/10W
R177	1-216-817-11	METAL CHIP	470	5%	1/16W
R178	1-216-817-11	METAL CHIP	470	5%	1/16W
R179	1-216-817-11	METAL CHIP	470	5%	1/16W
R180	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R181	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R182	1-216-033-00	METAL CHIP	220	5%	1/10W
R183	1-216-033-00	METAL CHIP	220	5%	1/10W
R184	1-216-295-11	SHORT	0		
R185	1-216-295-11	SHORT	0		
R186	1-216-295-11	SHORT	0		
R189	1-249-417-11	CARBON	1K	5%	1/4W F
R190	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R191	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R193	1-249-441-11	CARBON	100K	5%	1/4W
R194	1-216-821-11	METAL CHIP	1K	5%	1/16W
R195	1-216-295-11	SHORT	0		
R196	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R200	1-216-295-11	SHORT	0		(SE610B/SE710B/SE810B/SX710B/X9B)
R201	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R202	1-216-821-11	METAL CHIP	1K	5%	1/16W (SE610B/SE710B/SE810B/SX710B/X9B)
R203	1-216-055-00	METAL CHIP	1.8K	5%	1/10W (SE610B/SE710B/SE810B/SX710B/X9B)
R204	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R205	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R206	1-249-413-11	CARBON	470	5%	1/4W F
R207	1-249-413-11	CARBON	470	5%	1/4W F
R208	1-216-089-11	RES-CHIP	47K	5%	1/10W
R209	1-216-079-00	METAL CHIP	18K	5%	1/10W
R210	1-249-429-11	CARBON	10K	5%	1/4W
R211	1-216-089-11	RES-CHIP	47K	5%	1/10W
R212	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R214	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R216	1-216-295-11	SHORT	0		
R217	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R218	1-216-025-11	RES-CHIP	100	5%	1/10W
R219	1-216-025-11	RES-CHIP	100	5%	1/10W
R220	1-216-025-11	RES-CHIP	100	5%	1/10W (SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)
R221	1-216-295-11	SHORT	0		
R228	1-216-295-11	SHORT	0		
R231	1-216-017-91	RES-CHIP	47	5%	1/10W
R232	1-216-017-91	RES-CHIP	47	5%	1/10W (SE810/SX810/X9)
R233	1-216-017-91	RES-CHIP	47	5%	1/10W (SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)

Ref. No.	Part No.	Description			Remark
R239	1-216-295-11	SHORT	0		(SE610B/SE710B/SE810B/SX710B/X9B)
R240	1-216-295-11	SHORT	0		(SE610B/SE710B/SE810B/SX710B/X9B)
R281	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R282	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R283	1-216-045-00	METAL CHIP	680	5%	1/10W
R284	1-216-045-00	METAL CHIP	680	5%	1/10W
R289	1-216-295-11	SHORT	0		
R290	1-216-295-11	SHORT	0		
R301	1-216-833-11	METAL CHIP	10K	5%	1/16W
R302	1-216-079-00	METAL CHIP	18K	5%	1/10W
R304	1-216-821-11	METAL CHIP	1K	5%	1/16W
R305	1-216-821-11	METAL CHIP	1K	5%	1/16W
R306	1-216-083-00	METAL CHIP	27K	5%	1/10W
R307	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R308	1-208-820-11	METAL CHIP	39K	0.5%	1/10W
R309	1-216-079-00	METAL CHIP	18K	5%	1/10W
R310	1-216-079-00	METAL CHIP	18K	5%	1/10W
R311	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R312	1-216-083-00	METAL CHIP	27K	5%	1/10W
R313	1-216-133-00	METAL CHIP	3.3M	5%	1/10W
R315	1-216-033-00	METAL CHIP	220	5%	1/10W
R316	1-216-033-00	METAL CHIP	220	5%	1/10W
R322	1-216-295-11	SHORT	0		
R323	1-216-065-91	RES-CHIP	4.7K	5%	1/10W (SE810/SX810/X9)
R324	1-216-065-91	RES-CHIP	4.7K	5%	1/10W (SE810/SX810/X9)
R325	1-216-079-00	METAL CHIP	18K	5%	1/10W (SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)
R326	1-216-079-00	METAL CHIP	18K	5%	1/10W (SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)
R329	1-216-817-11	METAL CHIP	470	5%	1/16W
R351	1-216-017-91	RES-CHIP	47	5%	1/10W
R352	1-216-063-91	RES-CHIP	3.9K	5%	1/10W (SE610/SE710/SX710/SX717)
R352	1-216-067-00	METAL CHIP	5.6K	5%	1/10W (SE810/SX810/X9)
R353	1-217-671-11	METAL CHIP	1	5%	1/10W
R354	1-216-031-00	METAL CHIP	180	5%	1/10W
R355	1-216-075-00	METAL CHIP	12K	5%	1/10W
R356	1-216-079-00	METAL CHIP	18K	5%	1/10W
R357	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R358	1-216-079-00	METAL CHIP	18K	5%	1/10W
R359	1-216-035-00	METAL CHIP	270	5%	1/10W
R360	1-216-109-00	METAL CHIP	330K	5%	1/10W
R361	1-216-833-11	METAL CHIP	10K	5%	1/16W
R362	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R369	1-216-091-00	METAL CHIP	56K	5%	1/10W
R370	1-216-047-91	RES-CHIP	820	5%	1/10W
R390	1-216-083-00	METAL CHIP	27K	5%	1/10W (SE810/SX810/X9)
R391	1-249-394-11	CARBON	12	5%	1/4W F (SE810/SX810/X9)
R392	1-216-833-11	METAL CHIP	10K	5%	1/16W (SE810/SX810/X9)
R420	1-216-295-11	SHORT	0		
R421	1-216-295-11	SHORT	0		
R422	1-216-295-11	SHORT	0		
R423	1-216-095-00	METAL CHIP	82K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R427	1-216-017-91	RES-CHIP	47	5%	1/10W
R460	1-216-833-11	METAL CHIP	10K	5%	1/16W
R461	1-216-037-00	METAL CHIP	330	5%	1/10W
R464	1-216-089-11	RES-CHIP	47K	5%	1/10W
R465	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R466	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R467	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R468	1-216-077-91	RES-CHIP	15K	5%	1/10W
R470	1-216-833-11	METAL CHIP	10K	5%	1/16W
R471	1-216-037-00	METAL CHIP	330	5%	1/10W
R477	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R478	1-216-077-91	RES-CHIP	15K	5%	1/10W
R479	1-216-089-11	RES-CHIP	47K	5%	1/10W
		(SE710/SE810/SX710/SX717/SX810/X9)			
R500	1-216-817-11	METAL CHIP	470	5%	1/16W
R501	1-216-817-11	METAL CHIP	470	5%	1/16W
R502	1-216-817-11	METAL CHIP	470	5%	1/16W
R503	1-216-817-11	METAL CHIP	470	5%	1/16W
R509	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		(SE710/SE810/SX710/SX717/SX810/X9)			
R510	1-249-408-11	CARBON	180	5%	1/4W F
R511	1-249-407-11	CARBON	150	5%	1/4W F
R512	1-216-021-00	METAL CHIP	68	5%	1/10W
R514	1-216-037-00	METAL CHIP	330	5%	1/10W
R515	1-216-821-11	METAL CHIP	1K	5%	1/16W
R516	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R517	1-216-022-00	METAL CHIP	75	5%	1/10W
R518	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		(SE710/SE810/SX710/SX717/SX810/X9)			
R541	1-216-025-11	RES-CHIP	100	5%	1/10W
		(SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)			
R542	1-249-408-11	CARBON	180	5%	1/4W F
		(SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)			
R543	1-249-407-11	CARBON	150	5%	1/4W F
		(SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)			
R545	1-216-085-00	METAL CHIP	33K	5%	1/10W
		(SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)			
R546	1-216-089-11	RES-CHIP	47K	5%	1/10W
		(SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)			
R547	1-216-821-11	METAL CHIP	1K	5%	1/16W
		(SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)			
R548	1-216-022-00	METAL CHIP	75	5%	1/10W
		(SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)			
R549	1-216-021-00	METAL CHIP	68	5%	1/10W
		(SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)			
R570	1-216-817-11	METAL CHIP	470	5%	1/16W
		(SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)			
R571	1-216-817-11	METAL CHIP	470	5%	1/16W
		(SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)			
R572	1-216-817-11	METAL CHIP	470	5%	1/16W
		(SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)			
R573	1-216-817-11	METAL CHIP	470	5%	1/16W
		(SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)			
R574	1-216-097-11	RES-CHIP	100K	5%	1/10W
		(SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)			
R575	1-216-097-11	RES-CHIP	100K	5%	1/10W
		(SE610: B, E/SE710: B, D, E, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)			
R590	1-216-821-11	METAL CHIP	1K	5%	1/16W
R591	1-216-821-11	METAL CHIP	1K	5%	1/16W
R592	1-216-821-11	METAL CHIP	1K	5%	1/16W
R611	1-216-821-11	METAL CHIP	1K	5%	1/16W
		(SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)			
R615	1-216-047-91	RES-CHIP	820	5%	1/10W
		(SE610: B, E/SE710/SE810/ SX710/SX717/SX810/X9)			
R617	1-216-821-11	METAL CHIP	1K	5%	1/16W
R618	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R624	1-216-833-11	METAL CHIP	10K	5%	1/16W
R625	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R626	1-249-417-11	CARBON	1K	5%	1/4W F
R627	1-216-121-11	RES-CHIP	1M	5%	1/10W
R660	1-216-821-11	METAL CHIP	1K	5%	1/16W
R661	1-216-121-11	RES-CHIP	1M	5%	1/10W
R662	1-216-817-11	METAL CHIP	470	5%	1/16W
R663	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R664	1-216-295-11	SHORT	0		
R666	1-216-295-11	SHORT	0		
R667	1-216-037-00	METAL CHIP	330	5%	1/10W
R668	1-216-025-11	RES-CHIP	100	5%	1/10W
R669	1-216-025-11	RES-CHIP	100	5%	1/10W
R670	1-216-817-11	METAL CHIP	470	5%	1/16W
R671	1-216-295-11	SHORT	0		
R672	1-216-821-11	METAL CHIP	1K	5%	1/16W
		(SE610: B, K, N/SE710: B, K, N/SE810: B, K, N/ SX710: B, K, N/X9: B, N)			
R702	1-216-295-11	SHORT	0		
R704	1-216-025-11	RES-CHIP	100	5%	1/10W
R705	1-216-033-00	METAL CHIP	220	5%	1/10W
R713	1-216-025-11	RES-CHIP	100	5%	1/10W
R714	1-216-113-00	METAL CHIP	470K	5%	1/10W
R723	1-216-025-11	RES-CHIP	100	5%	1/10W
R724	1-216-089-11	RES-CHIP	47K	5%	1/10W
R730	1-216-817-11	METAL CHIP	470	5%	1/16W
R731	1-216-817-11	METAL CHIP	470	5%	1/16W
		(SE610: A, B, E, K, N/SE710: B, D, E, I, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)			
R732	1-216-817-11	METAL CHIP	470	5%	1/16W
R733	1-216-817-11	METAL CHIP	470	5%	1/16W
		(SE610: A, B, E, K, N/SE710: B, D, E, I, K, N/ SE810: B, D, E, K, N/ SX710/SX717/SX810/X9: B, D, E, N)			
R736	1-216-295-11	SHORT	0		
R754	1-216-025-11	RES-CHIP	100	5%	1/10W

Ref. No.	Part No.	Description	Remark
R755	1-216-025-11	RES-CHIP 100 5% 1/10W	
R756	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R757	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R800	1-216-101-00	METAL CHIP 150K 5% 1/10W	(SE710/SE810/SX710/SX717/SX810/X9)
R801	1-216-833-11	METAL CHIP 10K 5% 1/16W	(SE710/SE810/SX710/SX717/SX810/X9)
R802	1-216-833-11	METAL CHIP 10K 5% 1/16W	(SE710/SE810/SX710/SX717/SX810/X9)
R803	1-216-081-00	METAL CHIP 22K 5% 1/10W	(SE710/SE810/SX710/SX717/SX810/X9)
R804	1-216-833-11	METAL CHIP 10K 5% 1/16W	(SE710/SE810/SX710/SX717/SX810/X9)
R805	1-216-833-11	METAL CHIP 10K 5% 1/16W	(SE710/SE810/SX710/SX717/SX810/X9)
R806	1-216-833-11	METAL CHIP 10K 5% 1/16W	(SE710/SE810/SX710/SX717/SX810/X9)
R807	1-216-085-00	METAL CHIP 33K 5% 1/10W	(SE710/SE810/SX710/SX717/SX810/X9)
R813	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R850	1-216-025-11	RES-CHIP 100 5% 1/10W	(SE710/SE810/SX710/SX717/SX810/X9)
R851	1-216-077-91	RES-CHIP 15K 5% 1/10W	(SE710/SE810/SX710/SX717/SX810/X9)
R852	1-216-081-00	METAL CHIP 22K 5% 1/10W	(SE710/SE810/SX710/SX717/SX810/X9)
R853	1-216-821-11	METAL CHIP 1K 5% 1/16W	(SE710/SE810/SX710/SX717/SX810/X9)
R856	1-216-097-11	RES-CHIP 100K 5% 1/10W	(SE710/SE810/SX710/SX717/SX810/X9)
R857	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	(SE710/SE810/SX710/SX717/SX810/X9)
R858	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	(SE710/SE810/SX710/SX717/SX810/X9)
R859	1-216-123-11	METAL CHIP 1.2M 5% 1/10W	(SE710/SE810/SX710/SX717/SX810/X9)
R860	1-216-123-11	METAL CHIP 1.2M 5% 1/10W	(SE710/SE810/SX710/SX717/SX810/X9)
R861	1-216-117-00	METAL CHIP 680K 5% 1/10W	(SE710/SE810/SX710/SX717/SX810/X9)
R862	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	(SE710/SE810/SX710/SX717/SX810/X9)
R871	1-216-065-91	RES-CHIP 4.7K 5% 1/10W	(X9: B, D, E, G)
R872	1-216-105-91	RES-CHIP 220K 5% 1/10W	(X9: B, D, E, G)
R873	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	(X9: B, D, E, G)
R874	1-216-821-11	METAL CHIP 1K 5% 1/16W	(X9: B, D, E, G)
R875	1-216-821-11	METAL CHIP 1K 5% 1/16W	(X9: B, D, E, G)
R876	1-216-001-00	METAL CHIP 10 5% 1/10W	(X9: B, D, E, G)
R968	1-216-101-00	METAL CHIP 150K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R969	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R970	1-216-085-00	METAL CHIP 33K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R971	1-216-085-00	METAL CHIP 33K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R972	1-216-083-00	METAL CHIP 27K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R973	1-216-105-91	RES-CHIP 220K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R974	1-216-081-00	METAL CHIP 22K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R975	1-216-295-11	SHORT 0	(SE610B/SE710B/SE810B/SX710B/X9B)
R976	1-216-059-00	METAL CHIP 2.7K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R977	1-216-089-11	RES-CHIP 47K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R978	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R979	1-216-833-11	METAL CHIP 10K 5% 1/16W	(SE610B/SE710B/SE810B/SX710B/X9B)
R980	1-216-097-11	RES-CHIP 100K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R981	1-216-083-00	METAL CHIP 27K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R982	1-216-089-11	RES-CHIP 47K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R983	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R985	1-216-817-11	METAL CHIP 470 5% 1/16W	(SE610B/SE710B/SE810B/SX710B/X9B)
R986	1-216-089-11	RES-CHIP 47K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R988	1-216-077-91	RES-CHIP 15K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R989	1-216-821-11	METAL CHIP 1K 5% 1/16W	(SE610B/SE710B/SE810B/SX710B/X9B)
R990	1-216-295-11	SHORT 0	(SE610B/SE710B/SE810B/SX710B/X9B)
R993	1-216-085-00	METAL CHIP 33K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R994	1-208-820-11	METAL CHIP 39K 0.5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R995	1-216-085-00	METAL CHIP 33K 5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R996	1-208-820-11	METAL CHIP 39K 0.5% 1/10W	(SE610B/SE710B/SE810B/SX710B/X9B)
R997	1-216-833-11	METAL CHIP 10K 5% 1/16W	(SE610B/SE710B/SE810B/SX710B/X9B)
R998	1-216-833-11	METAL CHIP 10K 5% 1/16W	(SE610B/SE710B/SE810B/SX710B/X9B)
R999	1-216-295-11	SHORT 0	(SE610B/SE710B/SE810B/SX710B/X9B)
		< SWITCH >	
S100	1-771-155-11	SWITCH, ROTARY (CAM ENCODER)	
S101	1-571-958-11	SWITCH, PUSH (1 KEY) (REC PROOF)	
S460	1-786-097-21	SWITCH, TACT (**I**/⏻)	
S463	1-786-097-21	SWITCH, TACT (PROGRAM +)	
S464	1-786-097-21	SWITCH, TACT (AUDIO DUB)	(SE810/SX810/X9)
S476	1-786-097-21	SWITCH, TACT (PROGRAM -)	
S477	1-786-097-21	SWITCH, TACT (AUTO SET UP/RF CHANNEL)	
S478	1-786-097-21	SWITCH, TACT (SYNCHRO REC)	(SE710/SE810/SX710/SX717/SX810/X9)
		< TRANSFORMER >	
T350	1-431-097-11	TRANSFORMER, BIAS OSCILLATION	(SE610/SE710/SX710/SX717)
T350	1-435-728-11	TRANSFORMER, BIAS OSCILLATION	(SE810/SX810/X9)

Ref. No.	Part No.	Description		Remark
T390	1-423-415-11	TRANSFORMER, BIAS OSCILLATION (SE810/SX810/X9)		
		< TUNER >		
TU702	1-693-436-81	TUNER, IF (BTF-3WC428) (SE610: E, N/SE710 :E, N, I/SE810: E, N/SX710: E, N/SX717E/X9E)		
TU702	1-693-437-81	TUNER, IF (BTF-3WU604) (SE610G/SE710G/SE810G/X9G)		
TU702	1-693-438-81	TUNER, IF (BTF-3WC446) (SE610B/SE710B/SE810B/SX710B/X9B)		
TU702	1-693-439-81	TUNER, IF (BTF-3WC429) (SE610: A, K/SE710: D, K/SE810: D, K/SX710: D, K/SX717D/SX810/X9D)		
TU703	1-693-521-11	TUNER, IF (BTF-2WC421) (SE610: E, N/SE710 :E, N, I/SE810: E, N/SX710: E, N/SX717E/X9E)		
		< VIBRATOR >		
X160	1-579-463-11	VIBRATOR, CRYSTAL (32.768kHz)		
X161	1-781-717-21	VIBRATOR, CRYSTAL (17.734475MHz)		
X200	1-579-608-21	VIBRATOR, CRYSTAL (4.433619MHz)		
*	1-468-458-14	POWER BLOCK (SRV938EK) ********** (Ref.No. 2,000 Series)		
		< CAPACITOR >		
⚠C101	9-885-001-69	METAL	0.1uF	
⚠C102	9-885-001-69	METAL	0.1uF	
⚠C103	9-885-001-70	CERAMIC	1000PF	250V
⚠C104	9-885-001-70	CERAMIC	1000PF	250V
⚠C105	9-885-001-70	CERAMIC	1000PF	250V
⚠C108	1-113-937-91	CERAMIC	2200PF	250V
⚠C109	1-113-937-91	CERAMIC	2200PF	250V
⚠C151	9-885-001-81	ELECT	47uF	400V
C153	1-163-015-91	CERAMIC CHIP	3300PF	
C155	1-126-965-91	ELECT	22uF	50V
C156	1-126-960-91	ELECT	1uF	50V
C157	1-163-009-91	CERAMIC CHIP	1000PF	
C158	1-163-273-91	CERAMIC CHIP	820PF	
C159	1-163-251-91	CERAMIC CHIP	100PF	
C160	1-163-021-91	CERAMIC CHIP	10000PF	
C161	1-163-009-91	CERAMIC CHIP	1000PF	
C201	9-885-001-91	ELECT	220uF	25V
C202	1-126-925-91	ELECT	470uF	10V
C203	1-126-934-91	ELECT	220uF	16V
C206	1-126-947-91	ELECT	47uF	35V
C207	1-126-964-91	ELECT	10uF	50V
C208	1-126-925-91	ELECT	470uF	10V
C209	1-163-021-91	CERAMIC	0.01uF	50V
C212	1-163-021-91	CERAMIC	0.01uF	50V
C213	1-126-956-91	ELECT	0.1uF	50V
C251	1-126-967-91	ELECT	47uF	50V
C252	1-111-065-11	ELECT	680uF	25V
C253	1-111-016-91	ELECT	1200uF	10V
C254	9-885-001-92	ELECT	470uF	25V
C261	1-164-489-91	CERAMIC CHIP	0.22uF	16V
C301	1-111-118-91	ELECT	220uF	50V
C303	1-126-965-91	ELECT	22uF	50V
		< CONNECTOR >		
⚠CN101	1-580-230-11	CONNECTOR		
CN201	1-778-675-21	CONNECTOR 19P		
CN202	1-793-674-21	CONNECTOR 7P		
		< DIODE >		
⚠D101	9-880-927-01	DIODE 1N4005		
⚠D102	9-880-927-01	DIODE 1N4005		
⚠D103	9-880-927-01	DIODE 1N4005		
⚠D104	9-880-927-01	DIODE 1N4005		
D151	8-719-084-75	DIODE P6KE300 ARL		
D152	9-885-001-78	DIODE UF4007		
D153	9-885-001-79	DIODE 1SS119		
D154	9-885-001-80	DIODE PR1003		
D158	9-880-991-01	DIODE MA4270		
D203	9-885-001-86	DIODE MTZJ5.1		
D204	9-885-001-79	DIODE 1SS119		
D205	9-885-001-79	DIODE 1SS119		
D251	9-885-001-80	DIODE PR1003		
D252	9-885-001-87	DIODE UF3DL		
D253	9-885-001-88	DIODE SB340L		
D254	9-885-001-80	DIODE PR1003		
D301	9-885-001-87	DIODE UF3DL		
D302	9-885-001-89	DIODE D2S4M		
D303	9-885-001-90	DIODE MTZJ20		
D304	9-885-001-89	DIODE D2S4M		
D307	9-885-001-89	DIODE D2S4M		
		< FUSE >		
⚠F101	9-885-001-72	FUSE (T2AL/250V)		
		< IC >		
⚠IC151	9-885-001-74	IC TDA16846		
IC251	9-885-001-82	IC AN1431T		
		< LINE FILTER/COIL >		
⚠L101	9-885-001-67	LINE FILTER	10uH	
⚠L102	9-885-001-68	LINE FILTER	33mH	
⚠L103	9-885-001-68	LINE FILTER	33mH	
L201	9-885-001-93	CHOKE COIL	10uH	
L202	9-885-001-93	CHOKE COIL	10uH	
L205	9-885-001-94	CHOKE COIL	1uH	
		< PHOTO COUPLER >		
⚠PC151	9-885-001-75	COUPLER, PHOTO ON3171		
		< IC LINK >		
⚠PS201	1-533-592-21	LINK, IC (1.6A)		
⚠PS202	1-533-593-21	LINK, IC (2A)		
⚠PS251	1-533-589-21	LINK, IC (750mA)		
		< TRANSISTOR >		
⚠Q151	9-885-001-73	TRANSISTOR 2SK3047		
⚠Q201	8-729-141-01	TRANSISTOR 2SB733		

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

POWER BLOCK

Ref. No.	Part No.	Description		Remark
Q203	8-729-030-98	TRANSISTOR	2PD601A	
Q204	8-729-139-97	TRANSISTOR	2SC2785	
Q205	8-729-018-99	TRANSISTOR	2SD2394	
Q206	8-729-139-97	TRANSISTOR	2SC2785	
Q207	9-885-001-83	TRANSISTOR	2SD1862	
Q210	8-729-043-32	TRANSISTOR	DTA114EKA	
Q211	8-729-043-29	TRANSISTOR	DTC114EKA	
Q301	8-729-018-99	TRANSISTOR	2SD2394	
Q302	9-885-001-84	TRANSISTOR	DTC143EKA	
Q303	8-729-018-99	TRANSISTOR	2SD2394	
Q304	8-729-139-97	TRANSISTOR	2SC2785	
Q305	8-729-141-01	TRANSISTOR	2SB733	
Q306	9-885-001-84	TRANSISTOR	DTC143EKA	
Q307	9-885-001-85	TRANSISTOR	2SA1015	
		< RESISTOR >		
R101	9-885-001-71	CARBON	1M	1/2W
R151	1-247-903-91	CARBON	1M	1/4W
R152	1-247-903-91	CARBON	1M	1/4W
R155	1-216-073-21	RES, CHIP	10K	1/10W
R156	1-259-880-91	CARBON	2.2M	1/4W
R157	1-259-880-91	CARBON	2.2M	1/4W
R158	1-247-805-91	CARBON	82	1/4W
R159	1-249-397-11	CARBON	22	1/4WF
R160	1-247-795-91	CARBON	33	1/4W
R161	1-216-085-21	RES, CHIP	33K	1/10W
R162	1-216-085-21	RES, CHIP	33K	1/10W
R163	1-216-063-21	RES, CHIP	3.9K	1/10W
R164	1-247-861-91	CARBON	18K	1/4W
R201	1-216-049-21	RES, CHIP	1K	1/10W
R203	1-216-452-21	METAL	180	2W
R206	1-216-053-21	RES, CHIP	1.5K	1/10W
R207	1-247-615-91	CARBON	220	1/4W
R208	1-247-615-91	CARBON	220	1/4W
R209	1-247-615-91	CARBON	220	1/4W
R210	1-216-049-21	RES, CHIP	1K	1/10W
R213	1-216-089-21	RES, CHIP	47K	1/10W
R216	1-216-065-21	RES, CHIP	4.7K	1/10W
R217	1-215-857-81	METAL	10	1W
R218	1-215-908-81	METAL	33	3W
R219	1-247-847-91	CARBON	4.7K	1/4W
R220	1-216-065-21	RES, CHIP	4.7K	1/10W
R222	1-247-615-91	CARBON	220	1/4W
R251	1-249-402-11	CARBON	56	1/4W F
R261	1-216-049-21	RES, CHIP	1K	1/10W
R263	1-216-079-21	RES, CHIP	18K	1/10W
R264	1-216-077-21	RES, CHIP	15K	1/10W
R265	1-216-073-21	RES, CHIP	10K	1/10W
R266	1-216-061-21	RES, CHIP	3.3K	1/10W
R301	1-216-073-21	RES, CHIP	10K	1/10W
R302	1-215-869-81	METAL	1K	1W
R306	1-216-073-21	RES, CHIP	10K	1/10W
R307	1-215-869-81	METAL	1K	1W
R308	1-216-049-21	RES, CHIP	1K	1/10W
R311	1-247-885-91	CARBON	10K	1/4W
R312	1-215-880-81	METAL	10	2W
R313	1-215-880-81	METAL	10	2W
R314	1-215-892-81	METAL	1K	2W
R315	1-215-892-81	METAL	1K	2W
R316	1-247-879-91	CARBON	100K	1/4W
		< TRANSFORMER >		
⚠T151	9-885-001-76	TRANSFORMER, POWER		
		< VARIABLE RESISTOR >		
VR251	1-241-629-11	VARIABLE RESISTOR	5K	
		< VARISTOR >		
⚠Z101	9-880-928-01	VARISTOR	ERZV10D751	

Ref. No.	Part No.	Description
		MISCELLANEOUS
		**********
4	1-757-593-11	CABLE, FLAT (FDS-10) (SE610/SE710/SX710/SX717)
4	1-757-594-11	CABLE, FLAT (FDS-9) (SE810/SX810/X9)
5	1-762-844-31	SWITCH, ROTARY (SE810/SX810/X9)
53	1-757-537-11	CABLE, FLAT (FAC-9)
54	1-792-022-11	CABLE, FLAT (FFM-001)
⚠55	1-782-012-11	CORD, POWER
704	1-500-471-11	HEAD, FE
721	A-6775-791-A	ACE BLOCK ASSY (ALPS) (EURO 3)
770	1-772-364-11	DRUM ASSY, DZH-0B5A-R (EXCEPT SE610B/SE710B/SE810B/SX710B/X9B)
770	1-772-365-11	DRUM ASSY, DZH-0B6A-R (SE610B/SE710B/SE810B/SX710B/X9B)
M902	1-698-971-11	MOTOR, DC (CAPSTAN)
M903	X-3947-577-1	MOTOR ASSY, CAM
		**********
		HARDWARE LIST
		**********
#1	7-685-648-79	SCREW +BVTP 3X12 TYPE2
#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2
#4	7-682-147-01	SCREW +P 3X6
#5	7-685-133-19	SCREW (DIA. 2.6) (IT3B)

		ACCESSORIES & PACKING MATERIALS
		**********
	1-418-010-11	COMMANDER, STANDARD (RMT-V259) (SX717/SX810)
	1-418-010-31	COMMANDER, STANDARD (RMT-V259B) (X9N)
	1-418-780-11	COMMANDER, STANDARD (RMT-V288) (SX710: D, E, K, N)
	1-418-780-21	COMMANDER, STANDARD (RMT-V288A) (SX710B)
	1-418-782-11	COMMANDER, STANDARD (RMT-V259K) (SE810: D, E, G, K, N)
	1-418-782-21	COMMANDER, STANDARD (RMT-V259L) (SE810B)
	1-476-070-11	CONTROLLER, STB/SAT (RMT-CM103) (X9: B, D, E)
	1-476-070-21	CONTROLLER, STB/SAT (RMT-CM103) (X9G)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
	1-476-369-11	COMMANDER, STANDARD (RMT-V259R)	(X9: D, E, G)
	1-476-370-11	COMMANDER, STANDARD (RMT-V259S)	(X9B)
	1-476-406-11	COMMANDER, STANDARD (RMT-V288B)	(SE610: A, E, G, K, N/SE710: D, E, G, I, K, N)
	1-476-406-21	COMMANDER, STANDARD (RMT-V288C)	(SE610B/SE710B)
⚠	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P	(SE610G/SE710: G, I/SE810G/X9G)
	1-790-419-11	CORD, CONNECTION (PAL)	
	3-065-674-11	MANUAL, INSTRUCTION (FRENCH)	(SE610E/SE710: D, E/SE810: D, E/SX710: D, E/SX810)
	3-065-674-21	MANUAL, INSTRUCTION (SPANISH)	(SE610E/SE710E/SE810E/SX710E/SX717E)
	3-065-674-31	MANUAL, INSTRUCTION (GERMAN)	(SE610: A, E/SE710: D, E/SE810: D, E/SX710: D, E/SX717D/SX810)
	3-065-674-41	MANUAL, INSTRUCTION (ITALIAN)	(SE610A/SE710D/SE810D/SX710D/SX810)
	3-065-674-51	MANUAL, INSTRUCTION (DUTCH)	(SE610: A, E/SE710: D, E/SE810: D, E/SX710: D, E/SX810)
	3-065-674-61	MANUAL, INSTRUCTION (PORTUGUESE)	(SE610E/SE710E/SE810E/SX710E)
	3-065-674-71	MANUAL, INSTRUCTION (GREEK)	(SE610A/SE710D/SE810D)
	3-065-675-11	MANUAL, INSTRUCTION (SWEEDISH)	(SE610E/SE710E/SE810E/SX710E/SX717E)
	3-065-675-21	MANUAL, INSTRUCTION (DANISH)	(SE610E/SE710E/SE810E/SX710E/SX717E)
	3-065-675-31	MANUAL, INSTRUCTION (FINNISH)	(SE610E/SE710E/SE810E/SX710E/SX717E)
	3-065-676-11	MANUAL, INSTRUCTION (FRENCH)	(SE610B/SE710B/SE810B/SX710B)
	3-065-677-11	MANUAL, INSTRUCTION (ENGLISH)	(SE610G/SE710: G, I/SE810G)
	3-065-678-11	MANUAL, INSTRUCTION (ENGLISH)	(SE610: K, N/SE710: K, N/SE810: K, N/SX710: K, N)
	3-065-678-21	MANUAL, INSTRUCTION (CZECH)	(SE610K/SE710K/SE810K/SX710K)
	3-065-678-31	MANUAL, INSTRUCTION (POLISH)	(SE610N/SE710N/SE810N/SX710N)
	3-065-678-41	MANUAL, INSTRUCTION (HUNGALIAN)	(SE610N/SE710N/SE810N/SX710N)
	3-065-678-51	MANUAL, INSTRUCTION (RUSSIAN)	(SE610K/SE810K)
	3-065-680-11	INSTRUCTION (QUICK START GUIDE)	(SE610G/SE710G/SE810G)
	3-067-100-11	MANUAL, INSTRUCTION (FRENCH) (X9: D, E)	
	3-067-100-21	MANUAL, INSTRUCTION (SPANISH) (X9E)	
	3-067-100-31	MANUAL, INSTRUCTION (GERMAN) (X9: D, E)	
	3-067-100-41	MANUAL, INSTRUCTION (ITALIAN) (X9D)	
	3-067-100-51	MANUAL, INSTRUCTION (DUTCH) (X9: D, E)	
	3-067-100-61	MANUAL, INSTRUCTION (PORTUGUESE)	(X9E)
	3-067-100-71	MANUAL, INSTRUCTION (GREEK) (X9D)	
	3-067-101-11	MANUAL, INSTRUCTION (SWEDISH) (X9E)	
	3-067-101-21	MANUAL, INSTRUCTION (DANISH) (X9E)	
	3-067-101-31	MANUAL, INSTRUCTION (FINNISH) (X9E)	
	3-067-103-11	MANUAL, INSTRUCTION (FRENCH) (X9B)	
	3-067-104-11	MANUAL, INSTRUCTION (ENGLISH) (X9G)	
	3-067-105-11	INSTRUCTION (QUICK START GUIDE) (X9G)	
	3-068-372-11	MANUAL, INSTRUCTION (ENGLISH) (X9N)	
	3-068-372-21	MANUAL, INSTRUCTION (CZECH) (X9N)	
	3-068-372-31	MANUAL, INSTRUCTION (POLISH) (X9N)	
	3-068-372-41	MANUAL, INSTRUCTION (HUNGALIAN) (X9N)	
	3-068-372-51	MANUAL, INSTRUCTION (RUSSIAN) (X9N)	
	3-709-430-01	COVER, REMOTE CONTROL	(for RMT-V259/V288/V288A/V288B/V288C) (SE610/SE710/SX710/SX717/SX810)
	3-709-430-11	COVER, REMOTE CONTROL	(for RMT-V259K/V259L) (SE810)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

9-921-794-11

Sony Corporation
Home Video Division Company

2001C0500-1
© 2001. 3
Published by Quality Assurance Dept.